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Environmental Impact Analysis Process



FINAL

ENVIRONMENTAL IMPACT STATEMENT
SUPERSONIC FLIGHT OPERATIONS
IN THE RESERVE MILITARY
OPERATIONS AREA

HOLLOMAN AFB, NEW MEXICO
9-83

DEPARTMENT OF THE AIR FORCE
TACTICAL AIR COMMAND

93-18392



93

Air Force
Environmental Planning Division
(HQ USAF/CEVP)

Room 5B269
1260 Air Force Pentagon
Washington, DC 20330-1260

16 JUL 93

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(ATTN: Patt Mauby)

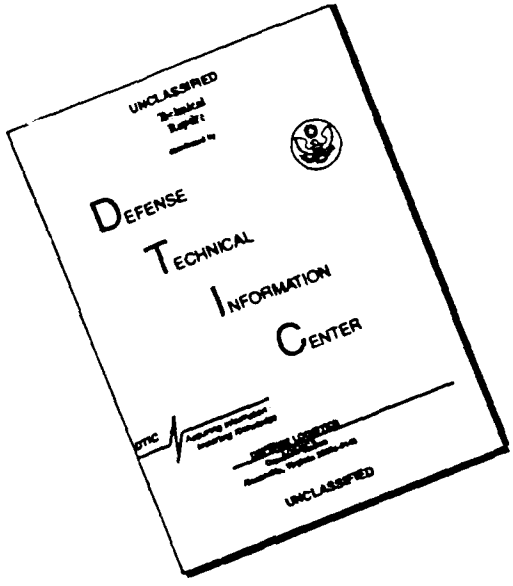
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Jack Bush, GM-14

Mr. Jack Bush
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Cover Sheet

(a) Responsible Agency: United States Air Force

(b) Proposed Action: Supersonic Flight Operations in the Reserve Military Operations Area in Catron County, New Mexico.

(c) Responsible Individual: Alton Chavis, HQ TAC/DEEV, Langley AFB, VA 23665, Telephone (804) 764-4430.

(d) Designation: Final Environmental Impact Statement (FEIS).

(e) Abstract: The 49th Tactical Fighter Wing (TFW) at Holloman AFB, New Mexico, proposes to fly approximately 300 supersonic sorties per month in the Reserve Military Operations Area/Air Traffic Control Assigned Airspace area. All proposed supersonic flights would be conducted during daylight hours and at an altitude above 15,000 feet mean sea level which is 8,000 to 9,000 feet above ground level in the MOA.

Several alternatives were reviewed including the "no action" option. A review of existing MOA's within 150 NM of Holloman AFB show the more viable alternatives to be: utilize only the White Sands Missile Range (WSMR) and the Reserve MOA; use only the WSMR and the Valentine MOA. The Air Force's preferred alternative is to conduct 300 sorties per month in both MOA's (Valentine and Reserve) to minimize the number of sonic booms each area would receive.

The primary environmental concern associated with the proposed action is the effects of sonic booms. It is projected an individual would hear no more than 2 to 3 sonic booms per day in the area of flight operations. Over-pressure levels would range from 1 to about 5 psf with the average carpet boom being 2 to 3 psf. Focus booms could occur in the area. Concerns have been raised about significant indirect impacts to the economy by sonic booms impacting ranching operations and recreational activities. Other concerns raised were wilderness, wildlife, human health and annoyance, sturctures, cultural resources, and commercial/ private air traffic impacts. Each attribute has been analyzed to a depth sufficient to determine if the potential impact would be significant. No significant impacts were identified on socio-economics or health effects. The potential long term health effects of loud noise is a debatable issue. Some researchers believe there is a link between noise and ill-health; however, this is contrary to the consensus of the sceintific community at this time.

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SUMMARY

DRAFT () FINAL (X) ENVIRONMENTAL IMPACT STATEMENT

1. Type of Action: Administrative (X) Legislative ()

2. Brief Description of Air Force Proposed Action:

The 49th Tactical Fighter Wing (TFW) at Holloman AFB, New Mexico, proposed to fly approximately 300 supersonic sorties per month in the Reserve Military Operating Area/Air Traffic Control Assigned Airspace Area (MOA/ATCAAA). Although variations are possible, typically three or four aircraft would fly together in the area for half an hour four or five times a day. Only a small portion of that time would be at supersonic speeds. All proposed supersonic flights would be conducted during daylight hours on weekdays and at an altitude above 15,000 feet Mean Sea Level (MSL) which is 8,000 to 9,000 feet above ground level in the MOA. The Reserve MOA is located in Catron County, New Mexico.

3. Public Review of the Revised Draft EIS:

The public review and comment period for the revised draft environmental impact statement (RDEIS) began on August 5, 1983, with publication of the Notice of Availability in the Federal Register, and ended on November 4, 1983. During this three month review period, public comments on the RDEIS were solicited. Written comments were submitted to Headquarters Tactical Air Command at Langley Air Force Base, Virginia. Verbal comments were received at the public hearing held in Reserve, New Mexico on October 20, 1983.

The Air Force's response to these comments consists of individual responses to the comments and questions. In addition, an errata sheet provides factual corrections to the RDEIS. Since changes in response to the comments are minor, the final EIS will consist of the RDEIS, the comments, the responses, the errata sheet, and this Summary. This Summary is similar to the one in the RDEIS, but it has been revised slightly in order to reflect the public comment process.

4. Summary of Environmental Impacts:

The environmental impacts associated with the proposed action are a result of the aircraft flying greater than the speed of sound. Currently, the Reserve MOA is used by the 49th TFW for F-15 training at subsonic speeds. The additional environmental impacts would be increased air pollutants and sonic booms.

There would be an increase in air pollutants due to accelerating to supersonic speeds; however, the increase would be small because the amount of time the aircraft would be supersonic is about one-half minute per sortie and is about two percent of the time currently spent in the MOA. The pollutants would be emitted at a relatively high altitude and spread over a large area; consequently, the impact on local ambient air quality would be minor.

The primary impact of concern for local residents is the effects of sonic booms on people, domestic animals and wildlife, archaelogical sites, structures, and local economics. The Air Force has conducted an intensive literature review, conducted special tests and developed a sonic boom model to assess the magnitude of impacts to the various environmental attributes.

The sonic boom model[94] prepared from analysis of similar F-15 operations in the Oceana MOA (W-72 off the coast of North Carolina) indicate the average duration of a supersonic event was about 15 seconds. The number of supersonic events per sortie averaged 2.7 with thirty percent of these producing a sonic boom that would hit the ground, or 0.8 booms per sortie. The study also shows the average airspeed and altitude were about 1.1. Mach and 15,100 feet, respectively. The average carpet boom (the boom pattern produced by straight, level flight) would impact about 28 square miles. Supersonic flight operations occur within an elliptical area of about 170 square miles. Statistical analysis of the Oceana data indicates the average carpet boom range between two to three pounds overpressure per square foot. (Greater than eleven pounds per square foot are generally required to cause structural damage.) The probability of a six pound per square foot boom occurring is about one in 20,000 chances. The chance of hearing four or more booms per day is about twelve percent; on average any one person should not hear more than two to three booms per day.

Maneuvering operations such as longitudinal accelerations, pushovers, and turns can cause focusing of the sonic wave at a fixed location. As indicated, these focus booms impact at a small, fixed area and do not follow the aircraft flight tract. The pressure increase can vary from two to five[78,98] times the overpressure level of the carpet boom at the location of focus; however, atmospheric conditions reduce the possibility of such increase to two to four times. Often atmospheric turbulence will cause a de-focusing effect that dissipates the boom completely.[99] A most important point about focus boom is that the peak pressure decays much more rapidly than that of a carpet boom and, thus, the positive impulse is much lower (contains less energy) than a carpet boom of the same overpressure. Galloway[99] has provided generalized algorithms for evaluating the spatial effects of focus booms. Statistical analysis of the data shows the chance of any one location receiving a focus boom from a linear acceleration and pushover maneuvers is one in about 3,300 and for a turn maneuver the probability is one in 5,000 chances. The probability of a focus boom is one in about 16,700 chances. Daley[105] has also investigated the spatial effect of a focus boom by using the National Oceanic and Atmospheric Administrations' Splash sonic boom model. The model showed that the focus zone exceeding nominal carpet was a band about 16 feet wide parallel to the curved flight track. At the point where the overpressure is twice the nominal carpet, the width reduces to about three feet. Applying this data to Reserve would show the probability of a focus boom impacting any one spot where the overpressure is equal to nominal carpet to be about one chance in 8,500; for overpressures two times or more greater than nominal, the probability reduces to one in 42,500 chances. Thus it can be seen that for higher magnification factors, the spatial effect and probability of the boom hitting any given location gets extremely small.

There are three categories of concern in terms of sonic boom impact to people: potential for hearing loss, non-auditory ill-health and annoyance. The long term day-night "C" weighted noise level associated with the maneuvering ellipse indicates a spatial average of 62 decibels. From an energy average standpoint, a focus or superboom adds less than 0.01 decibels to these values and consequently is not significant in terms of day-night average noise levels. This data, along with the fact that tests conducted where the overpressures range between 50 to 144 psf did not show any permanent hearing loss, leads the Air Force to the conclusion that booms in the range anticipated at the Reserve MOA would not cause any hearing loss, either from routine operations or from a focus boom.

Annoyance factors suggested by CHABA[107] coupled with EPA[100] and HUD[93] recommended noise level guidelines indicated that about six out of about 650 people in the Reserve MOA will be highly annoyed. The day-night average noise levels would be compatible with HUD criteria for a residential environment.

No definitive stance on physiological ill-health can be made at this time. There is little doubt that noise, including sonic booms, acts as a stressor, but it is not known with any degree of certainty whether prolonged exposure results in cumulative pathology. Some research has been conducted to determine the link between noise and ill-health; however, many of these studies are questioned by the scientific community. CHABA[95] was requested by OSHA and EPA to consider research that might be performed to examine the effects on human health from long-term noise exposure for industrial workers and the general population, respectively. CHABA's conclusion was that auditory effects were fairly well defined; however, in light of the data reviewed on non-auditory effects it would be prudent to obtain more critical research. While these considerations are primarily for general audible and industrial impact noises, it is stressed that specific data on sonic booms is also needed. EPA[92] indicates that due to the frequency range of sonic booms they may not be as harmful as other higher frequency impact sounds.

Researchers like Kryter[55] and Broadbent[11] indicate that if ill-health can result from noise, the connection probably is due to psychological stress factors. If this is the connection and if one accepts the social surveys that predict annoyance as a factor of noise levels, then one would conclude that a very low percent, if any, of the exposed people in the Reserve MOA would develop non-auditory ill-health conditions.

Public commenters urged the Air Force to provide a "worst-case" analysis of potential health impacts caused by sonic booms. However, specific predictions of such impacts are not possible. Additional years of research are needed to scientifically determine causal connections or to realistically predict generalized health effects based upon noise. Nevertheless, it has been suggested that there are links between noise and problems such as hypertension, cardiovascular changes, increased neurologic and gastrointestinal disturbances, changes in the course of pregnancy, and changes in hormone levels and other chemical balances. These effects are exemplary of conditions associated with stress. While such effects have been suggested, no method is available to predict either any specific reaction or the proportion of the community which could be affected. Although such effects cannot be dismissed, prevailing scientific opinion supports the expectation that the predicted noise exposure would not cause the effects speculated on above.

It is recognized that future research may provide a better understanding of the relationship between noise and non-auditory ill-health; however, in the interim decisions must be based on that data supported by the scientific community.

Sonic boom effects on domestic animals and wildlife have also been evaluated. Species of special concern in the Reserve area are the Peregrine falcon and bald eagle (both endangered), sheep, horses and beef cattle. Review of available literature, information obtained on species response to sonic booms in other areas and special studies conducted for coordination under the Endangered Species Act indicate supersonic flight in the Reserve MOA will not significantly impact domestic animals or wildlife in the area. The FWS has concluded the proposed action will not jeopardize the continued existence of the Peregrine falcon and the MOA's floor provides adequate clearance to minimize impacts to bald eagles.

Bighorn sheep on the Luke and Nellis AF Ranges have been exposed to sonic booms for a number of years. No noticeable effects in the population age structure, longevity or reproduction success has been found for the sheep on the Nellis Air Force Range.[61]

Domestic animals such as cattle, horses, sheep and poultry show very little behavioral effect from exposure to sonic booms.[21,35,48,66,103] Available literature and special studies reviewed support the fact that animals and wildlife can and do flourish in the presence of military aircraft operations, both subsonic and supersonic. Fletcher[35] concludes if aircraft noise were an adverse impact areas around large airports would be devoid of wildlife. This is also true for military operating areas and it should be noted that noise levels in MOAs are normally less than that at busy commercial airports and military airfields with jet activity.

The Air Force, in conjunction with the Texas Historic Preservation Commission and the Texas Bureau of Economic Geology, conducted a test to evaluate the significance of supersonic flight on archaeological sites within the Reserve MOA. The test did not indicate that a significant impact would occur. Applying this data along with data from studies conducted in Railroad Valley, Nevada, the Air Force concludes cultural resources in the Reserve MOA would not be significantly impacted.

Probable damage to structures should be limited and would primarily involve claims for window breakage. At the anticipated overpressure levels, the probability of glass breakage is about two-tenths of one percent. NASA's review of structural responses indicated overpressures less than about 11 pounds per square foot should not cause damage.[19] A 1977 evaluation on an adobe house in Southern Arizona indicated the structure reacted similarly to conventional style structures. Therefore, other than window breakage, structural damage may be limited to the probability that the one in 16,700 super booms could have an associated focus region where the focused portion would hit a structure. Due to the sparcity of structures in the area, the chance of a structure being hit by such a boom is limited; however, it is possible.

The potential for sonic boom impact in the local economy has been evaluated and determined not to be significant. The evaluation included a

review of population, employment, personal income, retail trade, assessed valuation, real estate development, tourism, ranching, farming, mining, and forestry. In no case did any of the areas' economic attributes indicate sonic booms would result in a significant impact.

In conclusion, the Air Force does not foresee significant impacts to human health, the local economy, or the other topics investigated, such as endangered species. As reflected by the public comments, however, the local populace clearly anticipates significant impacts to such factors as their quiet, rural lifestyle; the local economy; and their health. Many commenters opposed the proposal, criticized the Air Force's analysis, or both. Due to the subjective nature of individual responses to noise, active campaigns against a proposed flight program will frequently generate multiple anticipatory complaints far in excess of those occurring during the actual program. Nevertheless, a small number of people would be anticipated to remain "highly annoyed" after operations commenced. Because the booms themselves cannot be mitigated further, commenters emphasized the exploration and consideration of alternatives, such as alternate areas or reliance on weekend flying.

5. Alternatives Considered:

In addition to the no action alternative, other options considered feasible were: use only the White Sands Missile Range and Reserve MOA, and use only the White Sands Missile Range and Valentine MOA. Use of other locations within 150NM of Holloman AFB is not practical because other operations would be disrupted. Airspace locations greater than 150NM from Holloman AFB would result in excessive cost and are not considered viable alternatives.

PUBLIC

COMMENTS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI
INTERFIRST TWO BUILDING, 1201 ELM STREET
DALLAS, TEXAS 75270

SEP 15 1983

John O. Rittenhouse
Deputy for Installations Management
Office of the Assistant Secretary
Department of the Air Force
Washington, D.C. 20330

Dear Mr. Rittenhouse:

We have completed our review of the Revised Draft Environmental Impact Statement (EIS) on the proposed Supersonic Flight Operations in the Reserve Military Operations Area (MOA) which is located in west central New Mexico.

The Draft EIS examines the impacts associated with 300 to 600 proposed supersonic training flights each month by F-15 aircraft stationed at Holloman AFB, New Mexico. The principal impacts associated with the proposed training are related to as many as 24 sonic booms generated each day by aircraft maneuvering above 15,000 feet mean sea level in the MOA.

The following comment is offered for your consideration:

> Considering the many concerns expressed by area citizens and State Officials included in the Draft EIS, we suggest that the Air Force consider mitigation further. The potential adverse impact that frequent sonic booms would have on human and wildlife populations in the Reserve MOA could be reduced by flying some of these supersonic missions at Sells MOA and some overwater, as discussed in the EIS. Flying these missions at Sells MOA would require aerial refueling, but since each pilot must maintain refueling proficiency, multiple training requirements could be satisfied on a single mission.

We classify your Revised Draft EIS as LO-1. Specifically, we have no objections to the project as described in the Statement; however, we request that mitigation be considered further and offer suggestions. Our classification will be published in the Federal Register according to our responsibility to inform the public of our views on proposed Federal actions, under Section 309 of the Clean Air Act.

Definitions of the categories are provided on the enclosure. Our procedure is to categorize the EIS on both the environmental consequences of the proposed action and on the adequacy of the EIS at the draft stage, whenever possible.

8309594

We appreciate the opportunity to review the Draft EIS. Please send our office five (5) copies of the Final EIS at the same time it is sent to the Office of Federal Activities, U.S. Environmental Protection Agency, Washington, D.C.

Sincerely yours

Francis E. Phillips

Dick Whittington, P.E.
Regional Administrator

Enclosure

ENVIRONMENTAL IMPACT OF THE ACTION

LO - Lack of Objections

EPA has no objections to the proposed action as described in the draft impact statement; or suggests only minor changes in the proposed action.

ER - Environmental Reservations

EPA has reservations concerning the environmental effects of certain aspects of the proposed action. EPA believes that further study of suggested alternatives or modifications is required and has asked the originating Federal agency to re-assess these aspects.

EU - Environmentally Unsatisfactory

EPA believes that the proposed action is unsatisfactory because of its potentially harmful effect on the environment. Furthermore, the Agency believes that the potential safeguards which might be utilized may not adequately protect the environment from hazards arising from this action. The Agency recommends that alternatives to the action be analyzed further (including the possibility of no action at all).

ADEQUACY OF THE IMPACT STATEMENT

Category 1 - Adequate

The draft impact statement adequately sets forth the environmental impact of the proposed project or action as well as alternatives reasonably available to the project or action.

Category 2 - Insufficient Information

EPA believes the draft impact statement does not contain sufficient information to assess fully the environmental impact of the proposed project or action. However, from the information submitted, the Agency is able to make a preliminary determination of the impact on the environment. EPA has requested that the originator provide the information that was not included in the draft statement.

Category 3 - Inadequate

EPA believes that the draft impact statement does not adequately assess the environmental impact of the proposed project or action, or that the statement inadequately analyzes reasonably available alternatives. The Agency has requested more information and analysis concerning the potential environmental hazards and has asked that substantial revision be made to the impact statement. If a draft statement is assigned a Category 3, no rating will be made of the project or action, since a basis does not generally exist on which to make a determination.

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

SOUTHWEST REGION
P. O. BOX 1689
FORT WORTH, TEXAS 76101

DATE: August 25, 1983

IN REPLY REFER TO: ASW-43A

SUBJECT: Environmental Impact Statement - Supersonic Flight Operations in the Reserve Military Operations Area, Holloman AFB, New Mexico

FROM: Manager, Budget and Planning Branch, ASW-43

TO: Headquarters Tactical Air Command/DEEV
Langley AFB, VA 23665

Southwest Region has reviewed the environmental impact statement on proposed supersonic flight operations in the Reserve Military Operating Area. We find that it will have no adverse impact on FAA facilities now installed or planned.

Thank you for the opportunity to comment on this.

E. B. McCoy

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
FORT WORTH REGIONAL OFFICE
221 WEST LANCASTER AVENUE
P.O. BOX 2905
FORT WORTH, TEXAS 76113

REGION VI

IN REPLY REFER TO:

October 14, 1983

Mr. Alton Chavis
HQ TAC/DEEV
Langley AFB, Virginia 23665

Dear Mr. Chavis:

SUBJECT: Revised Draft Environmental Impact Statement (EIS) Supersonic Flight Operations in the Reserve Military Operations Area Holloman AFB, New Mexico

The Revised Draft EIS for Supersonic Flight Operations in Holloman AFB, New Mexico, has been reviewed in the Department of Housing and Urban Development's Fort Worth Regional Office. It has been determined that the Department will not have comments on the subject revised draft EIS, as the undertaking and its impacts do not fall within our special areas of environmental concern.

Sincerely,

Victor J. Hancock
Acting Regional Director
Community Planning and
Development Division, 6C

cc:
Office of Environmental Review (A-104)
U. S. Environmental Protection Agency
Washington, D.C. 20460

CFER, CPD, Central Office (Room 7151)

United States Department of Agriculture
Forest Service
Region 3
517 Gold Avenue SW
Albuquerque, NM 87102

Reply to: 1950

Date: SEP 30 1983

Department of the Air Force
ATTN: Mr. Alton Chavis
Headquarters Tactical Air Command/DEEV
Langley Air Force Base, VA 23665

Dear Mr. Chavis:

We have reviewed the revised draft environmental impact statement covering supersonic flight operations in the Reserve Military Operations Area. The Forest Service response from the Gila National Forest Supervisor to the original draft environmental impact statement dated October 12, 1979, and printed on pages 10-23 to 10-26 is still relevant. It does appear that concerns about consultation with the U.S. Fish and Wildlife Service have been addressed as well as some boundary adjustments based on wildlife and recreation impacts. We encourage further attention to our original concerns about impacts of sonic booms on wildlife species, dispersed recreationists and archeological resources as addressed by our previous comments. In addition, startling noises such as sonic booms also results in a reaction by domestic animals. Such reactions place the animal in a stressful situation and affects individual animal performance, although no method for measuring the degree of such affects has been developed. It is an established fact that stress which occurs during different physiological stages will have different effects.

We have reviewed the proposed action from an aviation safety standpoint. The 15,000 MSL minimum elevation which is indicated in the draft appears to adequately minimize conflict with Forest Service aviation and firefighting operations as stated on page 3-27 of the revised draft environmental impact statement.

Sincerely,

for M. J. HASSELL
Regional Forester

cc:
LMP
Gila N.F.

FS-6200-11(8-80)

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Project Review
Post Office Box 2088
ALBUQUERQUE, NEW MEXICO 87103

ER-83/963

SEP 19 1983

Mr. Alton Chavis
Headquarters Tactical Air Command/DEEV
Langley Air Force Base, Virginia 23665

Dear Mr. Chavis:

This responds to your request for the Department of the Interior's comments on the Revised Draft Environmental Statement for Supersonic Flight Operations for Reserve Military Operations Area, Catron County, New Mexico.

FISH AND WILDLIFE RESOURCES

This revised document contains the results of formal consultations between the Air Force and our Fish and Wildlife Service for the peregrine falcon and bald eagle. As a result of the consultation process, the Air Force has agreed to restrict supersonic maneuvering ellipses in order to avoid existing and potential nesting sites of these endangered birds. Based on these restrictions the Fish and Wildlife Service rendered a non-jeopardy decision for the peregrine falcon. Information specific to the effects of sonic booms on bald eagles was not sufficient to render a biological opinion for this species; however, the Air Force has agreed to safeguards which should avoid adverse impacts to eagle wintering or breeding habitats.

There is still no definitive information available on long-term physiological or behavioral effects of sonic booms on fish and wildlife specific to the Reserve Military Operations Area. If adverse effects are found to result from the proposed supersonic flight operations, it will be necessary to develop specific measures to mitigate these impacts. 3

Section 3.2.3.2, Sonic Boom Effect on Animals. There are several noteworthy omissions from the list of wildlife beginning on page 3-17. These include the black bear, bighorn sheep and elk. On page 3-18, a reference to Appendix G describes it as a list of wildlife from the Gila National Forest. In fact, Appendix G is a transcript of a public hearing. There is no list, as described on page 3-18, anywhere in the document. 4

HYDROLOGY

The evaluation of possible impacts of sonic booms on water wells, particularly water wells of considerable depth, is not adequate (pages 10-17 and 10-20). The conclusions of the assessment are based on results of a study for NASA (Goforth, T. T. and McDonald, J. A., 1968, Seismic Effects of Sonic Booms: NASA 5

Contractor Report, NASA CR 1137) which found that peak particle velocities recorded in a sealed vault at a depth of 44 feet were attenuated by a factor of 75 relative to those recorded at the surface (page 29). However, we note on page 18 of the NASA report that experimental conditions made it impossible to record ground velocity data from three seisometers placed in a deep well. The conclusion concerning attenuation of effects with depth is apparently based on energy losses incurred during transmission through sediments and does not consider effects from transmission of single or multiple overpressures directly down a deep, partially air-filled water well. We suggest that the analysis should address factors more specifically significant for wells, such as (1) effects of the sonic boom at the air/water interface, where great differences in compressibility will exist; (2) acceleration in the steel casing; and (3) intensification of overpressure effects by reflection and focussing by the walls of the drill hole.

5

5

We appreciate the opportunity to review the revised draft statement.

Sincerely,

Raymond P. Churan

Raymond P. Churan
Regional Environmental Officer

DEPARTMENT OF THE ARMY
SOUTHWESTERN DIVISION, CORPS OF ENGINEERS
1114 COMMERCE STREET
DALLAS, TEXAS 75242

REPLY TO
ATTENTION OF:

SWDED-MM

0 3 OCT 1983

SUBJECT: Draft Environmental Impact Statement (EIS) on Proposed Supersonic Flight Operations in the Reserve Military Operation Area (MOA)

Deputy for Environment and Safety
Office of the Secretary of the Air Force
Room 4C 885, The Pentagon
Washington, D. C. 20330

1. Our review of the draft Environmental Impact Statement (EIS) has resulted in the following comments:

6 a. The Environmental Impact Statement does not as required list the names and qualifications (expertise, experience, professional disciplines) of the persons who were primarily responsible for preparing the environmental impact statement or signficant background papers. 6

7 b. It would appear that there are still unresolved cultural resource problems to be addressed prior to the filing of the final Environmental Impact Statement. An example is the effects of a sonic boom on Puebloau Architectural ruins. It appears that if "bricks were loosened in a brick wall by a sonic boom" as described in this report there would be an adverse affect on loosely and uncemented joints in archeological architecture. 7

2. The report would be much easier to read and follow if additional details and specialized information were put into the appendices, and the EIS itself confined to generalized, statements and conclusions.

FOR THE COMMANDER:

William A. Dahe

for ARTHUR D. DENYS, P.E.
Chief, Engineering Division

STATE OF NEW MEXICO
OFFICE OF THE GOVERNOR
SANTA FE
87503

TONEY ANAYA
GOVERNOR

November 3, 1983

Mr. John O. Rittenhouse
Deputy for Installations Management
DEPARTMENT OF THE AIR FORCE
Headquarters Tactical Air Command/DEEV
Langley AFB, VA 23665

Dear Mr. Rittenhouse:

Thank you for the opportunity for the State of New Mexico to review the Revised DEIS - Supersonic Flight Operations in the Reserve Military Operations Area. New Mexicans have a long history of accepting federal projects and are fully versed in the importance of these projects to the well being and security of the nation. We realize, as well, the importance of maintaining a state of readiness and combat capable flight crews. We also understand and appreciate the economic impact of these projects to the domicilary state. Holloman is an important installation to our State's economy, and I look forward to continued growth at this important installation. At the same time, it is my duty and the duty of state agencies to protect the health and welfare of New Mexicans. Those responsibilities must consider the strong opposition to this particular project by some citizens of southwest New Mexico.

In balancing these economic and national security considerations with those that relate to environmental and health concerns, I offer the following comments.

The State's review of the Revised DEIS indicate that the revised DEIS does not contain sufficient information to permit complete determination as to the true environmental and other impacts of the proposal. As a result, I cannot adequately balance my concerns. The deficiencies that I would request be addressed in the final DEIS are as follow:

8 1. The whole area of noise effects on humans is discussed in numerous pages of debate. While there may not be any effects to humans, there is no clear evidence of this fact. 8

6 2. The effects of sonic booms on domestic livestock, farming or mining in the area is dismissed in a few cursory paragraphs. At the same time, however, the document admits that no significant data was collected on these subjects in the four control MOAs. 9

01 3. The State Aviation Division continues to have severe concerns about the proposal, its appropriateness in the Reserve area and the lack 10

of satisfaction in answering their concerns originally raised in 1979. 10

The state currently contains twelve military operations areas and several restricted areas. The establishment of the Reserve Military Operations area for supersonic flights is tantamount to establishment of a restricted area without going through the proper rule making procedures.

4. Currently, federal and state funds and policies have reserved this area of the state for the establishment of wilderness and other recreational pursuits. The establishment of this area as a supersonic operations areas is inconsistent with these previously established policies and funded projects. If these previously established policies are to be changed, it must be with considerable thought as to its consequences. 11

5. The Revised DEIS does not address adequately the possible alternatives to the proposal. There are restricted military areas in and near the State already in which the proposed flights could be conducted without any supersonic flights over citizens of New Mexico. Particularly because of the absence of evidence that there will not be adverse impacts on people, these alternatives must be fully considered. 12

6. Finally, the Revised DEIS does not consider nor comment on any secondary or socio-economic impacts of this proposal. That is, are there any military or civilian jobs at stake if the no action alternative is followed or will this project bring additional jobs into the state. If either prospect is possible, they should be addressed in the DEIS. 13

I do not feel the revised DEIS answers the concerns raised in the original DEIS nor does it clearly address the overall question of the safety of the proposal and, thus, does not meet NEPA requirements. I would urge that these concerns be addressed in the final EIS.

Consequently, I will reserve final opinion based upon an analysis of the final Environmental Impact Statement.

Technical documentation to support my position is attached for submission with this letter. This submission also contains the sign off to meet requirements of Executive Order 12372.

Thank you for your attention to this matter.

Sincerely,

TONEY ANAYA
Governor

TA:dm

HEALTH ENVIRONMENT department

STATE OF NEW MEXICO

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968, Santa Fe, New Mexico 87504-0968
(505) 984-0020

Steven Asher, Director

TONEY ANAYA
GOVERNOR

ROBERT McNEILL
SECRETARY

ROBERT L. LOVATO, M.A.P.A.
DEPUTY SECRETARY

JOSEPH F. JOHNSON
DEPUTY SECRETARY

Mr. David Martinez, Planner
Economic Analysis Division
Department of Finance and Administration
State Capitol Building
Santa Fe, New Mexico 87503

October 31, 1983

Re: EID comments on the Revised Draft Environmental Impact Statement (DEIS) for Supersonic Flight Operations in the Reserve Military Operations Area, Holloman AFB, New Mexico

Dear Mr. Martinez:

EID submitted extensive comments on the original DEIS (pp 10-32 to 10-38 and Appendix G, pp 104 to 108 in the revised DEIS). Funding for the noise program under which these comments were prepared has been terminated, and thus staff with the appropriate expertise were not available to review the revised DEIS in detail. The following points can, however, be made:

1. Studies quoted in the revised DEIS (pp 3-13 to 3-17) note that present data are inadequate to determine the effect of long-term exposure to noise on human health other than to the auditory system. Paragraph 2, page 3-17 states that "...it could be concluded that if other physiological effects occur they should be generally limited to that segment of the population predicted to be annoyed. In this respect, six of the 65 people living in the operational area are projected to be highly annoyed."

14 > This seems to indicate that the Air Force does not know whether or not there will be long term health consequences; but, if there are, believes they should not affect more than about 9% of the people in the operational area. The possibility of adverse health effects to almost 10% of the exposed population is a substantial hazard which the Air Force should, if possible, avoid. 14

15 2. The two studies cited (p 3-16) to determine the number of people who would be highly annoyed by sonic booms were done in urban environments (Oklahoma City, and near an Army base with regular exposure to artillery fire noise). No consideration seems to have been given to the possibility of increased impacts on people living in a normally quiet environment. 15

16 3. The revised DEIS notes (p 1-19) that "The prime recreational and tourist interests within that portion of the Gila Wilderness beneath the proposed area are hunting, fishing, and camping. The scenic drives, camp and picnic grounds, rushing streams and majestic mountains of the Gila National Forest draw thousands of visitors, and leisurely travel through the Forest is the most popular recreational use." In commenting on the impact of the proposal on 16

EQUAL OPPORTUNITY EMPLOYER

these uses, the revised DEIS states (p 3-13, 3-14) "The degree of personal irritation experienced by individuals participating in recreational activities is difficult to assess with accuracy." Nothing further is said about the effect of the proposal on the quality of the recreational experience, except that tourism is not expected to be affected (p 3-30). This seems to be saying that if an impact cannot be readily quantified it can be ignored. The Air Force should deal more directly with the fact that, while not precluding the use of the land for these activities, the proposed flights will detract from the level of enjoyment of people using the area in these ways. 16 16

The summary of the previous EID comments (pp 10-37 and 10-38) also are applicable to the revised DEIS:

17 The DEIS involves an action which introduces a new source of sound to an environment that is pristine and valued for its natural condition. Quiet and solitude are part of that natural condition. The proposed action will impact an estimated 2,775 square miles of New Mexico that is mostly federal land which is being developed by the various federal agencies for uses that are enhanced by preserving the natural state of the forests, wilderness and primitive areas.

The DEIS needs to address more fully the impacts of the new sound source, a large number of sonic booms, on that sensitive environment. The DEIS states that no known adverse health and welfare effects will occur, yet insufficient evidence is presented to determine that adverse effects will not occur. A proposed action of this magnitude impacting this type of irretrievable environment should not be initiated without conclusive evidence supporting the action. The final EIS will hopefully provide the information for a determination to be made. 17

The basic purpose of the National Environmental Policy Act is to address concerns of the type raised here and in the previous EID comments. Only by performing a thorough and professional analysis of these issues can the Air Force fulfill its obligations under NEPA.

Sincerely,

Mark Jones

Mark Jones
Environmental Review Coordinator

cc: Mr Douglas Mieklejohn, AG Office

STATE OF NEW MEXICO

TRANSPORTATION DEPARTMENT

AVIATION
DIVISION
(505) 827-4590

P.O. BOX 579
SANTA FE, NEW MEXICO
87504-0579

August 31, 1983

M E M O R A N D U M

TO: David Martinez
Economic Analysis Division, DFA

FROM: Bob White, Director

SUBJECT: NM 84 22-022 DEIS Supersonic Operations Reserve MOA

The Aviation Division received a copy of the above cited document on July 29, 1983, and submitted a response directly to the Department of the Air Force. Attached is a copy of our reply.

The Transportation Department remains opposed to the proposed supersonic activity. While we recognize the need for this training, Reserve MOA is the wrong place for it. The Air Force has a much better alternative which it should pursue.

If the Air Force persists in conducting this activity, it should only be done for a test period during which the validity of data presented in the EIS could be verified. If the experience falls short of the EIS claims, the Air Force should abandon all efforts to place this activity at Reserve.

18

18

STATE OF NEW MEXICO

TRANSPORTATION DEPARTMENT

AVIATION
DIVISION
(505) 827-4590

P.O. BOX 579
SANTA FE, NEW MEXICO
87503

August 19, 1983

Headquarters Tactical Air Command/DEEV
Langley AFB, Virginia 23665

RE: Revised Draft EIS, Supersonic Flight Operations,
Reserve MOA

Gentlemen:

Your revised environmental impact statement addresses most of the objections stated in past years to this proposal, however, it does not necessarily answer those objections.

19 A great deal of discussion revolved around "day-night average noise levels" (Ldn), which is of little significance in this case since it is a measure of accumualted noise energy and, as you rightly point out, there is little accumulated energy as a result of sonic booms. 19

20 It continues to be our position that all supersonic activity related to this project outside of WSMR should be accommodated within the Valentine MOA since the main elevation of that area is about 5,000 feet lower than Reserve, thereby allowing a substantially greater attenuation of overpressures. Furthermore, substantially fewer people would be impacted. 20

At Reserve, the major objection was and continues to be the annoyance created by the sonic booms. There may or may not be structural damage caused by this activity. If sonic booms exist and are perceptible by humans, I know of no way the annoyance factor can be eliminated.

I hesitate to submit the following comment since it might be interpreted as a lessening of our opposition to this proposal. I assure you that is not the case. However, if the Department of the Air Force opts not to take our suggestion on utilizing Valentine MOA and, instead, persists in its attempt to put

supersonic activity at Reserve, I would offer an additional recommendation. Before establishing Reserve as a permanent site for this activity there should be a test period of three to six months in which to measure the actual impact. This would allow you to determine if your Oceana MOA experience is, indeed, valid here and if your pilots can restrict their booms to the elliptical area as depicted in the EIS. It would also provide you with damage claim experience. 12

If, after that test period, the representations in the EIS (i.e. numbers of booms and people impacted, geographic limitation of impact area, focus booms as opposed to carpet booms, etc.) do not hold up, then all activity should cease and an alternate location found. 21

It is my feeling and the position of the Transportation Department that this proposal was not well conceived and that a better solution to your problem can be found. I would urge you to find it.

Respectfully yours,

Bob White
Director

BW/lo

OMB Approval No. 29-R0218

FEDERAL ASSISTANCE

2. Applicant's application — a. Number: | b. Date 19 Year Month Day:

3. State application identifier — a. Number: NM 84 08 22-022 | b. Date Assigned 19 Year 83 month 08 day 22

1. Type Of Action (Mark appropriate box)
- ☐ Preapplication
- ☒ Application
- ☐ Notification Of Intent (Opt.)
- ☐ Report Of Federal Action

Leave Blank

Section I - Applicant / Recipient Data

4. Legal Applicant/Recipient
- a. Applicant Name: Dept. of the Air Force
- b. Organization Unit: Headquarters Tactical Air Command
- c. Street/P O. Box: DEEV
- d. City: Langley AFB
- e. County:
- f. State: Virginia
- g. Zip Code: 23665
- h. Contact Person (Name & telephone no.): John O. Rittenhouse

5. Federal Employer Identification No.:

6. Program (From Federal Catalog)
- a. Number: 12.000
- b. Title: Dept. of the Air Force

7. Title and description of applicant's project:
DEIS Supersonic Flight Operations in the Reserve Military Operations Area (MOA).
The EIS describes the socioeconomic, biological and physical environmental effects of conducting supersonic flight operations in this MOA.

8. Type of applicant/recipient
A-State; B-Interstate; C-Substate District; D-County; E-City; F-School District; G-Special Purpose District; H-Community Action Agency; I-Higher Educational Institution; J-Indian Tribe; K-Other
(Specify): ____ Enter appropriate letter: ☐

9. Type of assistance
A-Basic Grant; B-Supplemental Grant; C-Loan; D-Insurance; E-Other
Enter appropriate letter(s): ☐☐

10. Area of project impact (Names of cities, counties, states, etc.): Holloman AFB, Otero, New Mexico

11. Estimated number of persons benefiting:

12. Type of application
A-New; B-Renewal; C-Revision; D-Continuation; E-Augmentation
Enter appropriate letter: ☐

13. Proposed Funding

a. Federal	$	.00
b. Applicant		.00
c. State		.00
d. Local		.00
e. Other		.00
f. Total	$	.00

14. Congressional Districts Of:
- a. Applicant: 02
- b. Project: 02

15. Type of change For 12c or 12e
A-Increase Dollars; B-Decrease Dollars; C-Increase Duration; D-Decrease Duration; E-Cancellation; F-Other Specify
Enter appropriate letter(s): ☐☐☐

16. Project Start Date Year month day: 19 83 09 30

17. Project Duration: 12 Months

18. Estimated date to be submitted to federal agency 19 Year month date: 83 09 30

19. Existing federal identification number:

20. Federal agency to receive request (Name, city, state, zip code): Dept. of the Air Force

21. Remarks added: ☐ Yes ☐ No

Section II - Certification

22. The Applicant Certifies That

a. To the best of my knowledge and belief, data in this preapplication/application are true and correct, the document has been duly authorized by the governing body of the applicant and the applicant will comply with the attached assurances if the assistance is approved.

b. If required by OMB Circular A-95 this application was submitted, pursuant to instructions therein, to appropriate clearinghouses and all responses are attached:

	No response	Response attached
(1) Clearinghouse Grants Mgnt & Contracts	☐	☐
(2)	☐	☐
(3)	☐	☐

23. Certifying representative
- a. Typed name and title:
- b. Signature:
- c. Date signed Year month day: 19

Section III - Federal Agency Action

24. Agency name:

25. Application received Year month day: 19

26. Organizational Unit:

27. Administrative office:

28. Federal application identification:

29. Address:

30. Federal grant identification:

31. Action taken
- ☐ a. Awarded
- ☐ b. Rejected
- ☐ c. Returned for amendment
- ☐ d. Deferred
- ☐ e. Withdrawn

32. Funding

a. Federal	$	.00
b. Applicant		.00
c. State		.00
d. Local		.00
e. Other		.00
f. Total	$	.00

33. Action date Year month day: 19

34. Starting date Year month day: 19

35. Contact for additional information (Name and telephone number):

36. Ending date Year month day: 19

37. Remarks added: ☐ Yes ☐ No

38. Federal agency A-95 action

a. In taking above action, any comments received from clearinghouses were considered. If agency response is due under provisions of Part 1, OMB Circular A-95, it has been or is being made.

b. Federal Agency A-95 Official (Name and telephone number):

424-101

Standard Form 424 Page 1 (10-75)
Prescribed by GSA, Federal Management Circular 74-7

(ALSO PLEASE COMPLETE REVERSE SIDE)

STATE CLEARINGHOUSE REVIEW CERTIFICATION FORM SCR-2

TO: Department of Air Force DATE: November 3, 1983

TITLE: DEIS Supersonic Flight Operations in the ~~Reserve Military Operations~~ Area

APPLICANT: Department of Air Force - Langley AFB

STATE APPLICATION IDENTIFIER (SAI) NUMBER: NM 84 08 22-022

FEDERAL CATALOG NO.: 12.000

FEDERAL AGENCY: Department of the Air Force

PROPOSED FUNDING (PER 424 FORM)	AMOUNT	TYPE PF ACTION
FEDERAL	$	() Preliminary Review
APPLICANT	$	() Final Review
STATE	$	() State Plan/Area Plan
LOCAL	$	(X) Draft Environmental Impact Statement
OTHER	$	
TOTAL	$	

REVIEW RESULTS

_____ Proposed action is supported.

_____ Proposed action is not in conflict with State, Areawide or Local Plans.

X Comments are attached for submission with this proposed action.

Cecilia Perea
Clearinghouse Review Coordinator

TO THE APPLICANT

You may now submit your application package, this form, and all review comments to the Federal or State Agency(ies) from whom action is requested.

Please notify the State Clearinghouse (sincle point of contact) of any changes in this project. Refer to the SAI Number on all correspondence pertaining to this project.

Peter Perez
DIRECTOR
Title

11/3/83
Date

Distribution:

White: Federal Agency
Green: Applicant
Canary: Clearinghouse

STATE CLEARINGHOUSE REVIEW (SCS) PROCESS SCR-1

(Upon completion return this form to the State Clearinghouse)

☐ Application

☒ Draft Environmental Impact Statement **(Revised)**

☐ State Plan

TO: **John A. Rittenhouse, Dept. Asst. Secretary of the Air Force, Langley AFB, Virginia**

FROM: **David F. Martinez, DFA, Economic and Financial Analysis Division**

The attached proposed action is submitted to you for review and comment. Please return this completed form by _____.

A. Title **~~Revised DEIS Supersonic Flight~~ Operations Reserve MOA**

B. Applicant **Dept. of the Air Force**

C. State Application Identifier (SAI) No. **NM 08 22-022**

1. To the best of your knowledge, does the proposed action conflict with any applicable statute, policy, order, or regulation?

 ☒ Yes If "Yes" please cite conflict on the reverse side.

 ☐ No **Federal and State policies establishing this area for recreational values**

2. Describe any concerns, suggestions or means of improving or strengthening the proposed action. Please note comments on reverse side.

3. Does the proposed action duplicate any activities which are geared towards the same target group?

 ☐ Yes If "Yes" please identify on the reverse side.

 ☒ No

4. Identify the masterplan or the comprehensive plan that this proposed action relates to. **N.A.**
 Is the proposed plan compatible with the plan?

 ☐ Yes

 ☐ No If "No" please cite conflicts on the reverse side.

5. Identify the block grant, if any, which the proposed action relates to. **N.A.**

RECOMMENDED ACTION

_____ Proposed action is supported

_____ Proposed action is supported with recommendations on reverse side

__x__ Proposed action is ~~not~~ supported. Note comments ~~xxxxxxxxxxxxxxxx~~ Attached

David F Martinez 11/2/83

Reviewer/Date

Economic And Financial Analysis Div.

Agency

cc: ☐ Applicant: This acknowledges receipt of your proposed action and it is now under clearinghouse review.

File D-DD/DCR-F/Herlan

(STATE CLEARINGHOUSE)
MIS-4
Review and Comment

TO: Tom Herlan

DATE: ~~8/29/83~~ 10/11/83

FROM: David F. Martinez, Economic and Financial Analysis Division, DFA

RE: NM 84 22-022 DEIS Supersonic Flight Operations Reserve Military Operations Area
SAI NUMBER PROJECT TITLE

~~DFA~~
LEAD AGENCY

Please review and comment on the above application and return to the sender by DFA.

1. Does this plan duplicate any programs which have similar goals and objectives to the proposed application?
 X Yes (If yes, please identify these programs.)
 ____No
 Existing flight operations in White Sands Missile Range and Valentine MOA, as described

2. Does the proposed application conform with a comprehensive plan developed for the area in which it is located?
 X Not applicable
 ____Yes
 ____No (If no, please explain in what way it is not compatible.)

3. Does the proposed application conflict with any applicable statute, order, rule, or regulation (federal, state or local)?
 X Yes (If yes, please cite the conflicting statute, order, rule or regulation.)
 ____No
 P.L. 89-665, as amended (National Historic Preservation Act) requires federal agencies to identify significant historic properties in area of effect and to determine effects on these. In my opinion, the statement does not adequately address this area.

4. Describe any suggestions or means of improving or strengthening the proposed application.
 See attached letter to Deputy Assistant Secretary.

23

23

____No interest in, or comment on, this project.
____Proposal is supported.
____Proposal is supported with recommendations.
____Proposal is not supported.
X Further information needed, review suspended and applicant notified of request.
____Comments attached.

On the basis of my review, I have indicated my response and/or recommendations above.

Signature of Reviewer

10-12-83
Date

State Historic Preservation Officer
Title

Historic Preservation Division, ~~Office of Cultural Affairs~~
Agency

Approved July, 1979
Secretary, DFA

1-white-to applicant
SPO copy

STATE OF NEW MEXICO
OFFICE OF CULTURAL AFFAIRS
HISTORIC PRESERVATION DIVISION

VILLA RIVERA, ROOM 101
228 EAST PALACE AVENUE
SANTA FE, NEW MEXICO 87503
(505) 827-8320

TONEY ANAYA
GOVERNOR

JILL Z. COOPER
CULTURAL AFFAIRS OFFICER

THOMAS W. MERLAN
DIRECTOR

October 12, 1983

John A. Rittenhouse
Deputy for Installations Management
Deputy Assistant Secretary of the Air Force
(Installations, Environment and Safety)
Headquarters Tactical Air Command/DEEV
Langley AFB, Virginia 23665

Dear Deputy Assistant Secretary:

This is to comment on the revised draft of the environmental impact statement for supersonic flight operations in the Reserve Military Operations Area. These comments have to do with the issue of effect on significant prehistoric and historic sites.

The statement shows sites listed on the State Register of Cultural Properties and National Register of Historic Places in the proposed supersonic area (pp. 3-24 and 25). It concludes that these sites are within the proposed supersonic boundaries, but outside the supersonic maneuvering area, and consequently should not be significantly impacted. It does not, however, identify National Register-eligible sites, even categorically.

A letter from me (p. 10-8) is included in the draft. It states that proposed supersonic flights are not likely to have an effect on significant cultural resources, but that our experience of undertakings of this kind is limited. Elsewhere (p. iv) the statement refers to "limited... probable damage to structures." More specific statements on damage to building fabric occur on pp. B-7 and D-11.

24

The statement quotes 36 CFR 800 (p. 10-1) and recognizes the responsibility of federal agencies to identify properties listed in or eligible to the National Register of Historic Places in the area of effect of the proposed undertaking.

24

Because the Department of the Air Force has not provided any general identification or discussion of National Register-eligible structures in the area of effect, nor any analysis of historic building materials other than one reference to adobe, it is my opinion that the present statement is inadequate to assess effects on significant cultural properties. I recommend that at a minimum, a categorical discussion of cultural resource

24 types and materials and possible or probable effects on these to be provided. The discussion of effects on modern construction (pp. D-11 to D-16) is instructive, but not fully relevant to this issue. 24

Thank you for your attention to this matter.

Sincerely,

Thomas W. Merlan
State Historic Preservation Officer

TWM/bc

GOVERNOR
TONEY ANAYA

DIRECTOR AND SECRETARY TO THE COMMISSION
HAROLD F. OLSON

State of New Mexico



DEPARTMENT OF GAME AND FISH

STATE CAPITOL
SANTA FE
87503

STATE GAME COMMISSION
EDWARD MUNOZ, CHAIRMAN
GALLUP

J.W. JONES
ALBUQUERQUE

JAMES H. KOCH
SANTA FE

A.H. GUTIERREZ, JR., M.D.
CARLSBAD

CHRISTINE DiGREGORIO
GALLUP

September 8, 1983

Mr. John Rittenhouse
Headquarters Air Command/DEEV
Langley AFB, Virginia 23665

Dear Mr. Rittenhouse:

I have reviewed the Environmental Impact Statement, Supersonic Flight Operations in the Reserve Military Operations Area, Holman AFB, New Mexico. This document adequately covers wildlife concerns of this agency. If the impact statement as presented is followed, no severe impact to wildlife should occur due to this operation.

Thank you for the opportunity to review and comment on this document.

Sincerely,

Harold F. Olson
Director

ea

GOVERNOR
TONEY ANAYA

DIRECTOR AND SECRETARY TO THE COMMISSION
HAROLD F. OLSON

State of New Mexico



DEPARTMENT OF GAME AND FISH

STATE CAPITOL
SANTA FE
87503

STATE GAME COMMISSION
EDWARD MUNOZ, CHAIRMAN
GALLUP

J.W. JONES
ALBUQUERQUE

JAMES H. KOCH
SANTA FE

A.H. GUTIERREZ, JR., M.D.
CARLSBAD

CHRISTINE DIGREGORIO
GALLUP

October 24, 1983

Mr. John O. Rittenhouse
Department of the Air Force
Deputy for Installations Management
Headquarters Tactical Air Command/DEEV
Langley AFB, Virginia 23665

Dear Mr. Rittenhouse:

On September 8, 1983, I sent you a letter with regard to the revised draft of the environmental impact statement on "Supersonic Flight Operations in the Reserve Military Operations Area." In that letter, I indicated that the draft adequately covers our wildlife concerns. However, my response was incomplete, and I am taking this opportunity to provide you a more complete response. Therefore, please consider the present letter as my response to the draft and discard my letter of September 8, 1983.

25 As I indicated in my earlier letter, I felt that wildlife concerns had been adequately treated in the revised draft of the EIS. Actually, this assessment was an over-simplification, in part because we substituted our knowledge of the wildlife in the impact area for that which was lacking in the draft. In other words, we failed to request that you present data on the wildlife in the impact area that would demonstrate that you understood the situation there. The fact that we know much about the wildlife in the area is not sufficient, for the critical issue is that you also know this and take it into account. Therefore, I am asking that the next draft of the EIS reflect more completely the status of wildlife in the Reserve MOA and that the potential impacts of your proposed flights in the area be properly reflected. 25

In regards to the data that you have presented on wildlife of the Reserve MOA area, we find only the following references:

Pp. 1-18 to 1-19: a general description of the life zones.

Pp. 2-1 to 2-2: an excerpt on wildlife concerns from a communication to you from this agency.

Pp. 3-17 to 3-21:	sonic boom effects on animals.
P. 10-1:	discussion of Section 7 consultation on endangered species. (Incidentally, the publicizing of the exact location of a bald eagle nestsite in Catron County here and elsewhere in this document is unnecessary, potentially detrimental, and should not have been done).
Pp. 10-5 to 10-7:	see p. 10-1 (above), including comments with regard to the unnecessary compromising of bald eagle nestsite.
Pp. 10-16 to 10-19:	various wildlife impacts in a letter to you from the Department of the Interior, Regional Environmental Officer, Albuquerque, New Mexico.
Pp. 10-23 to 10-26:	various wildlife matters in a letter to you from the Gila National Forest, Silver City, New Mexico.
Pp. 10-50 to 10-58:	various wildlife matters in letters to you from the Catron County Commission, Reserve, New Mexico.
Pp. C-1 to C-5:	Appendix C, "Facts about the Gila National Forest" (excerpted from Gila National Forest publication).
Pp. D-16 to D-19:	Appendix D, "Sonic Boom Characteristics."

Of these nearly 40 pages of wildlife-related materials, only about a third of the content could be considered to have been generated by your agency. In other words, most of the wildlife materials in the draft were made available by someone other than the Air Force. This suggests that your agency failed to appreciate the importance of the Reserve MOA to wildlife and thereby did not adequately address the matter. The fact that the additional materials on wildlife do not adequately address the wildlife means that the Air Force still needs to assume its proper responsibility and to document exactly what the environment (including wildlife) is that will be affected. 26 26

The relevance of proper documentation of the wildlife values in the Reserve MOA to your proposal rests on several factors. One, it is a requirement under NEPA that the environment be properly described in any

EIS, and in my view this has not been done. Two, wildlife concerns must be addressed and the relative values of different areas weighed in deciding on usage for supersonic flights. And three, impacts of such flights on wildlife need to be considered both indirectly as well as directly, thereby requiring a good data base and an understanding of a breadth of related issues.

I do not think that it is necessary for me to make a case for the inadequacy of the data base on wildlife in the revised draft of the EIS. The failure to document the kinds of vertebrates in the area is an obvious shortcoming, as are more specific lacks, such as identification of important areas for game and nongame species. My agency can help in this regard, but we are mainly prepared to recommend and review--not to compile data for you. Considering the dollar costs of your operation, I suspect that you can afford a few thousand dollars for having some reputable source put together an adequate wildlife data base for you.

With regard to the relevance of wildlife data in deciding on usage of areas for supersonic flights, let me explain. Supposed that you must decide between two or more areas for such flights on the basis of wildlife considerations. If one area has a high diversity and density of wildlife, many localized or otherwise notable species, and is otherwise superior biotically, then in my view it should be less impacted than an area that is of lesser biotic value. I suspect that the Reserve MOA is biotically more notable than either the Valentine or White Sands Missile Range MOA's, and therefore the former should receive lesser impacts. However, to make this determination you must have the data base, and as I have said, this is lacking.

27 The need to weigh biotic importance in your determinations would exist even if the potential for negative impacts to wildlife from supersonic flights were negligible. On the latter point you have presented some evidence that such may be the case. However, we remain far from convinced that supersonic and other aircraft sounds are harmless to wildlife, your study by David Ellis notwithstanding. On the contrary, we believe that such impacts on stressed organisms (e.g. pesticide-contaminated peregrine falcons) could well be detrimental. Furthermore, the fact that the Air Force paid thousands of dollars in damage claims (see P. D-17) means that even your agency can be convinced that some animals may be negatively impacted by aircraft noises. 27

28 My third point is that wildlife matters are important in an issue such as this because of indirect as well as the direct effects that supersonic flights may have. For example, suppose that you had trekked from El Paso to the Reserve MOA to watch birds, fish, or hunt. And suppose that your activities were interrupted at intervals by sonic booms in the area, to the extent that your enjoyment of a wildlife experience was marred or ruined. Would you be apt to return to the area, knowing that such disturbance could be there in perpetuity? In some cases I suspect that 28

we would lose wildlife enthusiasts from the Reserve MOA and this could prove detrimental not only to wildlife but to the economy of the area and that of New Mexico. In our state we need all of the wildlife support that we can get, and it is especially critical in an area such as the Reserve MOA--where the biotic diversity, primitiveness, and remoteness are natural attractants and reenforcers to wildlife enthusiasts. 27 28

I believe that under the circumstances the Air Force simply must do a better job in documenting the wildlife and associated values of the Reserve MOA. Even without admitting that supersonic flights in the area might prove negative to wildlife, it seems to me that your agency has an obligation to demonstrate that it understands and appreciates what is at stake there and how the proposed flights might affect matters. Once you understand these issues, I believe that the questionable nature of using the Reserve MOA for supersonic flights will become more apparent to you. Even if you do not eventually agree to drop or diminish the proposed flying there, we will feel that wildlife matters have received proper consideration.

Sincerely,

Harold F. Olson

Harold F. Olson
Director

vm

cc: Brant Calkins

BEN D. ALTAMIRANO
D-CATRON & GRANT-28
Address:
1123 Santa Rita Street
SILVER CITY, NEW MEXICO 88061
Business Telephone:
538-5231
Home Telephone:
538-3525

COMMITTEES:
Chairman:
CORPORATIONS
Member:
EDUCATION

New Mexico State Senate

Santa Fe

August 30, 1983

Headquarters Tactical Air Command/DEEV
Langley AFB, Virginia 23665

Re: Supersonic Flight Operations, Reserve, N. M. MOA

To Whom It May Concern:

The objections to supersonic activity in and around the Reserve area drew many objections from a very concerned constituency in and around the Reserve area. The public meeting held at the courthouse bore this out and I thought gave enough credence to the situation so that it may never surface again.

29 I understand now that the revised environmental impact statement would probably negate all the previous actions and that the supersonic activity may again commence at the high intensity that it occurred when the protests were registered. 29

While I cannot speak technically on the issue, that is not technicly in terms of overpressures, day-night average noise levels, and scientific terms related to supersonic booms, I can certainly express to you that the people in the area strongly object to the activity.

In the area the people object to the annoyance of the noise created by the sonic booms. I am convinced also, that their was sufficient evidence of damage to property brought out at the public meeting.

30 I feel that more study should be given to this activity and that maybe alternative sights for the same proposal be chosen. 30

Sincerely,

Ben D. Altamirano

State of New Mexico
OFFICE OF THE
Commissioner of Public Lands
Santa Fe

JIM BACA
COMMISSIONER

P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

October 25, 1983

HQ TAC/DEEV
Langley AFB, Virginia 23665

ATTN: Mr. Alton Chavis

Dear Mr. Chavis:

We have reviewed the draft Environmental Impact Statement prepared for the proposed Supersonic Flight Operations in the Reserve Military Operations area. There is significant acreage of State Trust Lands within the proposed boundary of these supersonic overflights. As trustee of those lands, mandated by law to get maximum income from these lands for the various beneficiaries (schools) throughout the state, I am concerned as to the potential detrimental effects of the daily sonic booms.

My overall concerns with this proposed Supersonic Flight Operation are lack of sufficient information on potential negative impacts and the strong possibility of economic loss to the ranching industry in the Reserve area.

31 As an example, I don't believe sufficient information is available to determine what effect these sonic booms would have on domestic livestock, the cattle industry specifically. Virtually all the State Trust Lands in this area are leased to various ranching interest for grazing purposes and I'm concerned that these sonic booms could have a negative effect on beef production thereby putting added economic burdens on the ranchers of that area. 31

32 Additionally, I'm not satisfied that sufficient information exists on any potential negative effects these sonic booms might have on the residents of this area. Also, the potential damaging effects of the sonic booms on structures could have negative economic impact on this entire area. 32

Until it can be proven that neither the residents nor the economy of this area will not be effected negatively by these supersonic overflights, I am opposed to this proposal.

Thank you for the opportunity to review, in draft, your environmental impact statement. Please keep me advised as to future actions and/or procedures you might follow.

Sincerely,

Jim Baca

JIM BACA
COMMISSIONER OF PUBLIC LANDS

cc: Governor's Office
Attorney General
David Martinez, Department of Finance and Administration

SOUTHWEST NEW MEXICO COUNCIL OF GOVERNMENTS

P. O. BOX 2157
211½ N. BULLARD
SILVER CITY, N.M. 88061
388-1974

SERVING AS:
Area Planning Jurisdiction
Area Comprehensive Health Planning
Area Economic Development
Area Agency on Aging
Area Housing Agency

September 12, 1983

John O. Rittenhouse
Deputy for Installations Management
Deputy Assistant Secretary of the Air Force
Headquarters Tactical Air Command/DEEV
Langley AFB, VA 23665

Dear Mr. Rittenhouse:

We have reviewed your Environmental Impact Statement on Supersonic Flight Operations in the Reserve Military operations area (MOA) and offer the following comments.

1. Your report evaluates potential economic characteristics of Sells & Gladden Arizona to the Reserve (MOA). There is no way to compare economic characteristics of such dissimilar areas for the following reasons.

 A. Tourism in the Reserve (MOA) is quite different than Sells & Gladden. The tourist in Catron County come to fish and hunt and backpack in the cool and quiet atmosphere. A quite different environment from where most of the visitors come from.

 B. Catron County offers a quiet rural existence for those wishing to retire from congested noise areas. The people who retire in Catron County do so because they wish to get away from the noise and pollution from where they have come. They are an independent lot and do not want the rules and regulations they have had to live with in the past.

 C. The type of tourism offered in Catron County is far different than that offered at Sells and Gladden Arizona. Catron County offers one of the largest Wilderness experience in the U.S. and Congress has added more land to the wilderness

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MEMBERS:

COUNTIES
Grant
Catron
Luna
Hidalgo

MUNICIPALITIES:
Bayard
Central
Deming
Columbus
Silver City
Lordsburg
Hurley
Reserve

DISTRICTS:
Grant NRCD
Deming NRCD
San Francisco NRCD
Hidalgo NRCD

SCHOOL DISTRICTS
Cobre Consolidated Schools
Lordsburg Municipal Schools

INDIVIDUALS
Mr. Robert Abercrombie

33

in the last few years. Hundreds of miles of streams and numerous lakes are available for the fisherman. Hunting for deer, bear, turkey, elk and antelope to name a few of the species available is unsurpassed in the State of New Mexico. Annually thousands of hunters from all over New Mexico, West Texas and Arizona arrive in the county and add to the local economy. In Catron County hunting begins in September and continues until January. Fishing in the county is nearly year around.

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2. Much of the data used in your economic evaluation is to out-of-date to be useful. Your statement that tourism had been declining appears to be based on the energy impact of the 1970's and does not reflect a 1981 report by the U.S. Travel Data Center which shows, that total travel generated dollars has increased from $664,000 in 1978 to $771,000 in 1981. Tourism has been one of the only bright spots in the economy of the county. With a national building stump of the last few years the timber industry had been at a virtual standdown. Recently with the resurgence of the housing industry we have seen the revival of the timber industry in Catron County. The unemployment rate for 1982 was 18.9%.

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3. Your report states that supersonic flights will be confined to a narrow corridor and a minimum altitude of 15,000 ft. What assurances are there that these standards will be maintained. If supersonic flights are flown at lower altitudes during the fire season disaster is possible with slurry bombers.

Deviation from flight paths and premature supersonic flight will have aircraft encroaching in the Gila Wilderness. The Reserve Airport is located at the edge of the Reserve MOA. The elevation of the airport is at an elevation of 6,387'. Again will all supersonic aircraft remain above the 15,000 limit. It appears that the potential for disaster with the dramatic elevation of terrain, slurry bombers at 13,000 ft elevations and airstrips located at elevations as high as 8,000 ft.

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4. At the time your initial report was being prepared a planning firm called Team Four was hired to do an economic analysis. We would suggest that the report they prepared with public funds be made available to the Catron County Commission and our office to help elevate the impact statement.

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In conclusion we feel that there are other areas where supersonic flights can be flown as outlined in your report that would have less socio and economic impact.

We thank you for the opportunity to respond to this impact statement.

Sincerely,

James W. Harrison, J.D.
Executive Director

COMMENTS OF THE BOARD OF COUNTY COMMISSIONERS

OF CATRON COUNTY, NEW MEXICO

on

REVISED DRAFT ENVIRONMENTAL IMPACT STATEMENT

SUPERSONIC FLIGHT OPERATIONS IN THE

RESERVE MILITARY OPERATIONS AREA,

HOLLOMAN AFB, NEW MEXICO

November 4, 1983

John J. Kelly
LAW OFFICES

201 BROADWAY SOUTHEAST · ALBUQUERQUE, NEW MEXICO 87102 · 505-842-6123

November 1, 1983

Mr. John O. Rittenhouse
Deputy for Installations Management
DEPARTMENT OF THE AIR FORCE
Headquarters Tactical Air Command/DEEV
Langley AFG, VA 23665

Dear Mr. Rittenhouse:

The Catron County Commission appreciates this opportunity to comment on the Revised Draft Environmental Impact Statement Supersonic Flight Operations In the Reserve Military Operations Area, (hereafter "RDEIS").

These comments are organized into three parts. Part One contains a resolution dated October 13, 1983 and approved by the Board of County Commissioners. It states the policy position of the County with respect to low level supersonic flight.

Part Two addresses the principal sections of the RDEIS from the standpoint of the National Environmental Policy Act and applicable regulations. It contains suggestions for further analysis and poses questions with respect to facts and opinions expressed in the RDEIS but not substantiated.

Part Three consists of a technical report prepared by Steven I. Rothman, B.S.E.E., M.S.E.M.. Mr. Rothman is a consultant to Catron County. He owns Copper Creek Systems a local consulting firm located in Glenwood, New Mexico. He brings to this project several years experience as a systems analyst with the Mitre Corporation.

The County Commission looks forward to a detailed response to the comments as required by 40 CFR Sec. 1503.4.

Yours Truly,

John J. Kelly
Attorney for the Board of County
Commissioners of Catron County,
New Mexico

JJK/lal

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STATE OF NEW MEXICO

CATRON COUNTY

RESERVE, NEW MEXICO 87830

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PATTY K. CHADDICK
TREASURER — 533-6384

BONNIE MILLIGAN
ASSESSOR — 533-6577

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PROBATE JUDGE

CORWIN HULSEY
SHERIFF — 533-6222

ELLIOTT G. McMASTER
COMMISSIONER DISTRICT NO. 1

W. ALVIN LANEY
COMMISSIONER DISTRICT NO. 2

DAVID M. VACKAR, CHAIRMAN
COMMISSIONER DISTRICT NO. 3

COMMISSION OFFICE — 533-6423

Resolution 017-84 October 13, 1983

WHEREAS the Catron County Commission meeting in special session on October 13, 1983 did propose the following resolution:

WHEREAS, we believe that the low level supersonic flight training will increase air pollution and the sonic booms will greatly increase the noise pollution which will adversely affect the Recreation Potential in Catron County, the recreation business being one of the major sources of revenue for the people of the county; and

WHEREAS, we believe the quality of the peaceful and rural lifestyle that presently exists in Catron County will be diminished if the supersonic training takes place; and

WHEREAS, Catron County has numerous historic buildings and archaeological ruins which will suffer structural damage because of repeated sonic booms, and these buildings and sites with such historic value could never be replaced even through compensation; and

WHEREAS, we believe that the citizens of Catron County already contribute enough to the nation's defense program with the present use of the Morenci training area and the low level training route through much of the county; and

WHEREAS, we believe that the Air Force's Revised Draft Environmental Impact Statement still does not adequately address the impact of the sonic booms on human health, the economy of the county, the effect of the wildlife, in particular the peregrine falcon and bald eagle, the effect on land values, and the damage to structures; and

WHEREAS, we believe the Air Force has not seriously considered any of the proposed alternatives to flying over Catron County.



NOW THEREFORE BE IT RESOLVED that the CATRON COUNTY COMMISSION opposes the low level supersonic training flights in CATRON COUNTY, NEW MEXICO, for the reasons hereinbefore stated.

DONE this 13th day of October, 1983.

BOARD OF CATRON COUNTY COMMISSIONERS

David M. Vackar, Chairman

Alvin Laney, Member

Elliott G. McMaster, Member

Attest:

Robert A. Atwood
Catron County Clerk

III. GENERAL COMMENTS

After reviewing the RDEIS it is the judgment of the County Commission that the subject document is an inadequate environmental impact statement upon which to make a decision as significant as the proposed creation of a low level supersonic flight area over the private property and leased lands of Catron County. The RDEIS is deficient in its description of the project, analysis of alternatives, discussion of environmental impacts and consideration of mitigation measures.

The County Commission subscribes to the purpose and goals of the National Environmental Policy Act (NEPA) as stated in section 101 of the Act. It calls upon the United States Air Force to revise and reconsider its proposal and rewrite the EIS in an effort to strike a balance between military objectives and the environmental values that Congress raised to the level of national policy when it enacted NEPA in 1969.

The most serious deficiency of the RDEIS, and one that affects all sections, is the poor quality of the information in the document. This makes accurate scientific analysis and objective decision making impossible. 40 CFR Sec. 1500.1(b). The regulations of the Council on Environmental Quality (hereafter "CEQ") mandate agencies to insure the professional and scientific integrity of the discussions in an environmental

impact statement. 40 CFR Sec. 1502.24. The same regulation requires that all sources relied upon for conclusions be explicitly referenced in footnotes. Notwithstanding these requirements the Air Force RDEIS makes assertion after assertion without documenting the basis of the facts contained in the text.

The Rothman Technical Report, infra, makes clear that the RDEIS contains incomplete analysis and lacks relevant information which is available or could be available to the Air Force at reasonable expense. The CEQ regulations at 40 CFR Sec. 1502.22 provide:

> When an agency is evaluating significant adverse effects on the human environment in an environmental impact statement and there are gaps in relevant information or scientific uncertainty, the agency shall always make clear that such information is lacking or that uncertainty exists.
>
> (a) If the information relevant to adverse impacts is essential to a reasoned choice among alternatives and is not known and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement.

Until the Air Force rewrites the EIS and supplies the necessary information the document cannot begin to meet the requirements of NEPA.

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In preparing its comments Catron County was hampered by the unavailability of source documents referenced in the RDEIS, and by the omission from the RDEIS of a list of the preparers of the

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document. Throughout the comment period the County has requested reference materials mentioned in the RDEIS only to be told that the materials are publicly available (location unspecified) or to receive no response at all. On the former point the CEQ regulations state: "No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the time allowed for comment." 40 CFR Sec. 1502.21. On the latter point it should be noted that the regulations require inclusion of a list of preparers in environmental impact statements. 40 CFR Sec. 1502.17.

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A. Programmatic EIS

The case for a programmatic or generic EIS is strong whenever a proposed action, when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together. 40 CFR 1508.25(a)(3).

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The Air Force and Department of Defense have not, but must, prepare a programmatic EIS on the plan to fly below 30,000 feet over lands outside of military reservations and restricted airspace. The County and the Wilderness Society separately raised this point three years ago, yet no mention of the issue

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can be found in the RDEIS.

It is now a matter of public record that the Air Force, chiefly through the Tactical Air Command, is planning unprecedented low level supersonic flights over populated areas not only in New Mexico, but also in Texas, Arizona, Utah and Nevada. It is safe to assume that common operational and training considerations or other objectives, are behind the effort of the Air Force to obtain supersonic air space outside restricted areas. It is also clear that the Air Force plan will potentially have similar environmental impacts throughout the west that will require similar methods of analysis in order to assess the nature and extent of the impacts. Alternatives and mitigation measures for each of the proposed supersonic areas should be thoroughly considered in one generic or programmatic EIS. 40 CFR Sec. 1502.4(c)(2).

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The Air Force is embarking on a new policy of conducting long-term, low-level supersonic operations directly over land owned and inhabited by private citizens instead of over water or government-owned, restricted areas (such as White Sands Missle Range). NEPA requires that the advisability of this type of action be analyzed in a programmatic EIS and not on a piece-meal basis as evidenced by the current proposal. Indeed, Catron County questions whether the Air Force can constitutionally

undertake its proposed actions without condemning the land over which it proposes to fly. Issues like this, and others, must be raised and analyzed in a programmatic EIS.

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B. Project Description

The project description does not distinguish clearly between the creation of a supersonic airspace over Catron County and the accomplishment of the supersonic training requirements of the 49th TFW. The former constitutes the true project. It will potentially have far greater environmental impacts than the latter. The RDEIS must clearly describe the project and all of its environmental ramifications. The RDEIS discusses the impacts of 600 sorties per month, but the Air Force proposal could potentially involve hundreds upon hundreds of additional flights per month.

Q.1. If a waiver is granted and supersonic flight is permitted over Catron County, will the waiver:

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a. Specify the number of supersonic flights per month permitted within the supersonic operations area (SOA)?

b. Specify the Air Force units authorized to fly within the SOA and the Air Force bases from which supersonic flights may originate?

c. Prohibit other military units from using the SOA?

d. Specify a minimum flight level?

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Q.2. Have waivers from the requirements of Air Force Regulation 55-34 been granted within the last ten years?

Q.3. If the answer to the previous question is in the affirmative please:

a. Identify the MOA for which the waivers were granted.

b. State the month and year the waivers were granted and, if applicable, the month and year the waivers were rescinded.

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c. State the name of the Air Force base and unit that requested the waiver.

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Q.4. Are there any applications for a waiver of Air Force Regulation 55-34 presently pending? If so please state the name of the applicant.

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42 Q.5. How many F-15's are currently stationed at Holloman AFB?

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43 Q.6. How many were at Holloman in 1978, 1979, 1980, 1981 and 1982?

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Q.7. Please identify the documents which constitute the basis of the following statements on page 1-3 of the RDEIS:

44 a. The 49th TFW needs to accomplish 1200 supersonic sorties per month.

44

b. The Army's ongoing mission prohibits use of the WSMR airspace to the extent required by the 49th TFW.

45 Q.8. Did the Army's research and development operations have priority over the 49th TFW at the time the F-15 beddown decision was made?

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46 Q.9. How many T-38's are presently based at Holloman AFB? 46

47 Q.10. How many T-38's were based at Holloman in 1978, 1979, 1980, 1981 and 1982? 47

48 Q.11. How many T-38 sorties were conductd on an average daily basis from Holloman AFB in 1978, 1979, 1980, 1981 and 1982? 48

49 Q.12. Will there be an increase in the number of T-38's or F-15's based at Holloman if the necessary waivers are obtained for an SOA within the Reserve and Valentine MOA's? 49

50 Q.13. Of the 160-170 daily T-38 sorties how many, on the average, require use of a gunnery range? 50

51 Q.14. Of the 160-170 daily T-38 sorties how many on the average use WSMR? McGregor Range? Talon MOA? Beak MOA? 51

52 Q.15. Who will manage the airspace within the Reserve MOA following designation of an SOA? Will the SOA be off limits to all other aircraft? 52

Q.16. What is the basis of the statement on p. 1-13 that the 1200 supersonic sortie requirement is expected to remain constant? 53

Q.17. If there is an increase anticipated in WSMR research and development projects, is it not possible that the 49th TFW will be required to increase beyond 600 the projected number of monthly sorties flown outside the WSMR? 54

Q.18. What is the substance of the agreement between the 49th TFW and the 479th TTW with respect to the allocation of flight time over WSMR. Is it true that the 479th TTW has priority? 55

Q.19. What documents contain the information used as the basis for the answer to the preceding question? 56

C. Alternatives

The alternative section of an EIS is the heart of the environmental impact statement. Natural Resources Defense Council v. Callaway, 524 F.2d 79, 93-92 (2nd Cir. 1975). The

RDEIS must "rigorously explore and objectively evaluate all reasonable alternatives," as well as discuss the reasons why possible alternatives are eliminated from detailed study. 40 CFR Sec. 1502.14(a). The RDEIS fails to meet this standard.

An EIS must discuss the environmental impact of alternatives. Impact statements:

> . . .must not simply list possible alternatives; instead it must contain a detailed and careful analysis of the relative environmental merits and demerits of the proposed action and possible alternatives. NRDC v. Callaway, supra, 524 F.2d at 92; NRDC v. Morton, 458 F.2d 827, 834 (D.C. Cir. 1972).

The purpose of the discussion of alternatives is to "present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public. 40 CFR Sec. 1502.14. The RDEIS fails to meet this standard as well.

An objective review of alternatives to supersonic flight over Catron County would at a minimum analyze in detail the following seven alternatives.

1. Fly at White Sands on weekends.
2. Temporarily relocate the 49th TFW.

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3. Temporarily relocate the 479th TTW

4. Fly supersonically over lands with lower elevations to attenuate noise.

5. Change the WSMR priorities between the 479th TTW and 49th TFW.

6. Fly supersonic in the Talon, Beak or Pecos MOA's.

7. Make use of Cannon AFB for the 479th TTW or 49th TFW.

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The RDEIS pays lip service to aspects of the above mentioned alternatives, but it does devote substantial treatment to them as required by NEPA. Furthermore the RDEIS does not identify the agencies preferred alternative or alternatives. 40 CFR Sec. 1502.14(e).

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Q.20. If 50 supersonic sorties can be flown per day on weekends at White Sands Missle Range, why does the RDEIS conclude that only 120 additional sorties per month can be flown? There are nine weekend days per month; multiplied by 50 this results in 450 additional monthly sorties.

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Q.21. Why must weekend flying result in a seven day work week for base support personnel? It would seeem more sensible to increase the number of base support personnel to accomodate using the F-15 seven days per week. This would stimulate the local economy and be

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less expensive than flying over Catron County.

Q.22. How do you reconcile paragraph 4.4.2.1. on pages 4-15, 4-16 of the RDEIS, with statements contained in the environmental assessment for the F-15 beddown to the effect that all supersonic flight would be within the White Sands Missle Range? See Beddown E.A. pages 21, 30.

Q.23. What is the elevation of Valentine, Texas?

Q.24. Is it not correct that because of its average elevation, supersonic flight in the Valentine MOA will have less adverse impact than supersonic flight in the Reserve, MOA, all other variables being equal?

Q.25. Is it not correct that there is no potential for adverse noise impact upon wilderness areas within the Valentine MOA?

Q.26. On page 4-1 paragraph 4.1.1.1., reference is made to Air Force and FAA regulations that require the Air Force to avoid or minimize impact on other airspace users. Please provide a citation to the referenced regulations.

Q.27. Isn't it true that while the F-15 needs a 40 x 50 mile area to accomplish effective training only about a third of that total area is required for supersonic flight? 65

Q.28. Isn't it true that supersonic flight elipses could be fit into other MOA's within 150 miles of Holloman and affect fewer people within the elipse than are present within the Reserve elipse on page 4-16? 66

Q.29. The RDEIS at page 4-5 states that the Talon MOA could be expanded to a 20 x 30 N.M. area, but concludes this is insufficient for supersonic flight. Measurement of the Talon MOA along its north-south and east-west axis, however, shows that the Talon MOA as 40 x 40 N.M. at its widest. Is there any reason why this MOA could not be squared off to provide a full 1600 sq. N.M. and further expanded by 10 N.M. on its western side to provide almost 2000 sq. N.M. of flight space? 67

Q.30. What is the population below the Talon MOA presently configured? Below the Beak A MOA? Beak B MOA? Beak C MOA? 68

69 Q.31. A comparison of the September 1979 and April 1983 versions of the Albuquerque Sectional Aeronautical Chart, Scale 1:500,000 does not reflect a 1980 division of the Talon MOA into three working areas as stated at the top of page 4-5 of the RDEIS. Please elaborate on the statement in the EIS. 69

70 Q.32. Is there any reason why the Talon MOA cannot be moved westward away from Artesia and Carlsbad? 70

71 Q.33. If supersonic flight takes place only in an elipse of 12 x 18 N.M. isn't it true that there should be little difficulty conducting supersonic training within the current Talon MOA and still maintain a five mile supersonic flight distance from the cities of Artesia and Carlsbad? 71

72 Q.34. Why does the RDEIS not consider temporary relocation of the 479th TTW, and use of the current WSMR airspace by the 49th TFW? 72

73 Q.35. What units based at Cannon AFB use the Pecos MOA? In answer to this question please identify the wing or unit, state the type of aircraft flown, the nature of 73

the flight operations, and the flight levels within which the flight operations take place.

Q.36. Why does the EIS say that Cloudcroft and Mescalero are within the Beak MOA?

Q.37. Isn't it true that supersonic operations could easily be conducted within the Beak MOA's without sonic booms impacting Ruidoso, Mescalero or Cloudcroft?

Q.38. From whom must approval be obtained to raise the ceiling of the Beak, Talon or Pecos MOA's to 50,000 feet?

Q.39. Please provide citations to any DOD, FAA, or other regulations that regulate changes in the floor and ceiling levels of existing MOA's.

Q.40. From whom must approval be obtained to bring about a change in common carrier flight routes to accomodate use of airspace for military operations? Please cite to the applicable regulation.

79 Q.41. What is the basis of the statement at page 4-6, that there are no hard surfaced runways within the Reserve MOA? 79

80 Q.42. Why does the RDEIS in its discussion of temporary deployment of Holloman units only discuss relocation to Tyndall AFB or Nellis AFB? 80

81 Q.43. Why does the RDEIS contain no discussion of temporary deployment of the 479th TTW? 81

82 Q.44. Why does the RDEIS contain no discussion of temporary deployment of either the 49th TFW or the 479th TTW to Cannon AFB, New Mexico? 82

83 Q.45. Why does the RDEIS not reflect a cost benefit analysis of:

A. Flying seven days a week at WSMR v. Flying in the Reserve MOA.

B. Temporary relocation of the 479th TTW to Cannon v. Flying in the Reserve MOA. 83

84 Q.46. Why does the RDEIS not consider establishing supersonic airspace within the Talon, Beak, Reserve, Valentine and Pecos MOA's and then dividing the 84

supersonic flights between all five areas to minimize noise impacts over any one area? 84

D. Environmental Effects

1. Noise - See Rothman Technical Report, infra.

2. Air Quality

It is impossible to evaluate air quality impacts based on the discussion contained in the EIS. This is principally due to the failure of the EIS to quantify current or base levels of pollutants. Case line information should be provided for carbon monoxide, hydrocarbons, nitrogen oxides, sulfur oxides and partuculates. Table I on page 3-1 is also inadequate. It compares current aircraft emissions with projected future emissions, but leaves the reader with no information concerning the basis of the figures contained therein. 85

Q.47. Does Table I, include emissions from subsonic as well as supersonic flight?

Q.48. What types of aircraft are included in the current and projected figures? 86

Q.49. How many annual flights of each type of aircraft are assumed in arriving at the current and projected figures.

Q.50. Do the figures in Table I inlude only aircraft from Holloman AFB or all aircraft? Please be specific.

Q.51. What will be the air quality impact in surrounding Wilderness areas from the aircraft pollutants emitted during flight within the Reserve MOA?

3. Economy

The eonomic impact analysis of proposed supersonic flight on the economy of Catron County is inadequate and misleading. The economic impact study of four other southwest MOA's prepared by a private consultant for the Air Force provides little revelant data and no credible analysis from which to predict the impact of supersonic flight on the Catron County economy.

Among other inadequacies discussed in the Rothman Technical Report, infra, the following are the most significant

and bear repetition.

a. There is no data to support the conclusion that the economies of the four base MOA's are comparable to the economy of Catron County.

b. There is no data to support the conclusion that the type of aircraft, nature of flight operations, number of sorties, number of sonic booms, altitude of flight operations, ground elevations, or CDNL noise curves, are sufficiently similar in the four base MOA's to the projected and potential Catron County situation, to justify the comparisons undertaken.

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c. In Catron County the proposed Reserve supersonic flight area occupies a substantial portion of the county's geographic area and includes a substantial portion (almost half) of the county's total population. In the base MOA's the supersonic areas include small fractions of several counties and insignificant percentages of the total county populations. The county data compiled with respect to the base MOA's is therefore a poor indication of the impact on the economies of the communities directly under the supersonic flight area and of no value in assessing the potential impact on the economy of Catron County.

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4. Wildlife

Q.52. It is difficult to follow the response of the United States Fish and Wildlife Servie at pp. 10-4, 10-5, and 10-6, without first reviewing the referenced Air Force correspondence of December 15, 1980, December 3, 1981 and May 5, 1980? Please include these letters in the next EIS.

16 Q.53. What are the minimum ceiling levels established by the Air Force for flight over bald eagle territory? 16

ROTHMAN TECHNICAL REPORT

INTRODUCTION

As a systems analyst I was directed by Catron County to analyze this RDEIS, to assess the probable sonic boom exposure of the residents of the county, to estimate the possible adverse health effects or other environmental impacts, and to evaluate the alternatives. However, it soon became clear that the RDEIS could not form a basis of any type of analysis of environmental problems that would result from supersonic flight operations. The document is rife with errors. There are so many errors of so many different types that no meaningful analysis could be performed.

The objective of the proposed supersonic flights is to train F-15 pilots in air combat maneuvers, allowing them, when they choose, to exceed the speed of sound. I started out asking the question, "How much training is required?" Immediately any analyst is brought to a complete halt in pursuing his investigations of the document: for if training is the objective then there should be a measure of how much is needed. The document provides none.

From beginning to end, the RDEIS concerns itself with the number of sorties flown. When flying from Holloman Air Force Base to Catron County, the time for the sortie is 84 minutes of which only 30 minutes can be used for training, the remaining 54 minutes being time in transit. A similar sortie conducted over White Sands Missile Range or some other area closer to Holloman Air Force Base allows more training per sortie; in fact, as I will show later, the same sortie could provide at least twice as much training if conducted in an area closer to the F-15's base. It follows that "number of sorties" is not a measure of pilot training! Because the document considers only the quantity of sorties without regard to the training that takes place on each sortie, it cannot be used to determine if any particular alternative would provide the 49th Tactical Fighter Wing with sufficient training.

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I found that a systems analysis based on this document cannot be done. Do not be mislead by the brevity of these comments. I could write a document of the same weight and size of the RDEIS as a critique of the RDEIS. Instead, I have chosen a categorization of the types of errors that occur in the document and will provide the reader with a sampling of each error type. Following are categories that are used:

I.	Errors in document craftsmanship	page: 3
II.	Errors in use of reference materials	4
III.	Errors in conceptual techniques and analytic methods	9
IV.	Omission of key reference sources	16
V.	Omission of impacts and alternatives	18

Overall Conclusions are on page 25, with References and Exhibits attached.

I. ERRORS IN DOCUMENT CRAFTSMANSHIP

1. There are three large-scale maps of the area presented in the RDEIS. The one on page 3-26 includes a scale. The scale is incorrect, making it very difficult to make sense of these maps. If this scale is used, the proposed supersonic area increases from about 1700 square miles to 5800 square miles. 93

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2. The population figures on the page 4-16 map are in error. Even worse is the discrepancy between this page in the Reserve RDEIS and the same page in the Valentine RDEIS: the pages appear identical except the population figures have been changed. While the town of Reserve is shown to have 440 people in the Reserve document, it has 3500 in the Valentine document. Both are wrong. Other erasures and substitutions can be seen on these two pages (refer to attached exhibits). This type of manipulation is inexcusable and inexplicable. It may have been intended to give the impression to the people of Valentine that more people live in the Reserve area than really do. 94

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3. On page 4-19 there is a map of the Valentine area which is in error, as a comparison with the map on page 3-7 of the Valentine RDEIS would indicate (see exhibit, looking closely at numbers inside the ellipses). Only the most diligent research would uncover the fact that some of the numbers are arbitrary map keys while other numbers on the same map are population figures. The impression received when looking at the map on page 4-19 is that there is a tremendous population in the Valentine MOA outside of the defined ellipses. This is untrue. The numbers outside the ellipses are reference numbers that are explained nowhere, neither in the Valentine document nor in the Reserve document. 95

There is no way to have discovered the meaning of the map on 4-19 by looking at the Reserve RDEIS itself. Only by a comparison with the Valentine document is anything found to be out of place. To see the futility of any analysis when the documents are such poor quality, look at page 3-7 of the Valentine document: the map refers you to "Table 2". However "table 2" is irrelevant, giving no information about this map at all.

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4. In this section, and in each of the following sections, I have described only a few samples of each error type. My purpose is to demonstrate the futility of trying to use the RDEIS as the basis for an environmental analysis.

II. ERRORS IN USE OF REFERENCE MATERIALS

In general, references have been used in a way reminiscent of a movie advertiser's use of critics' reviews, not in a way consistent with scientific inquiry. The documents have been quoted out of context, have been misquoted, or have been otherwise misconstrued. It is the rule in this RDEIS that the authors have selected those parts of the reference documents that seem favorable to them and have omitted those parts that are unfavorable, even to the extent of misrepresenting the reference entirely. Of course this is inappropriate for a NEPA environmental analysis. The following examples will prove the point:

(All document numbers are from Section 11 of the RDEIS)

1. Page 4-11 tries to justify the selection of Holloman Air Force Base for the beddown of the F-15s. "Six selection criteria" from the Beddown Document (which is reference number 15 in Section 11) are shown. The Air Force has to some extent paraphrased the reference but, in Item Number 2, has changed the referenced selection criterion completely. In the Beddown Document, selection criterion 2 refers to an area having only limited general aviation, but the RDEIS refers instead to an area having sparse population. This goes beyond a paraphrase. This seems to be an intentional misquote from the reference. The Air Force has changed infrequently used airspace to sparsely populated land beneath the airspace in apparent justification to fly over sparsely populated area. The Beddown Document intended no such thing. 96 95

Further, the Beddown Document makes clear in several places that the selection of Holloman Air Force Base was predicated upon use of the White Sands Missile Range. Page 21: "F-15 and T-38 activity will take place within the restricted airspace controlled by White Sands Missile Range. The airspace overlies unpopulated desert plains and sonic booms generated during the training will not be perceived outside the boundaries of the White Sands Missile Range." Page 30: "No additional airspace is planned to support the transition from F-4 to F-15 aircraft or the increase of T-38 aircraft." (typo corrected) Here, then, is an example of not only an intentional misquote from the reference source, but a deliberate misrepresentation of the reference. It is clear from the Beddown Document, which is itself an environmental impact statement, that these F-15's were based in Holloman Air Force Base with the intention of using White Sands Missile Base exclusively for any supersonic operations. The authors of the RDEIS have apparently tried to justify the concept of flying supersonically over people by re-writing history. This type of error cannot be explained in an innocent manner, and in fact fails even the liberal ideas of Madison Avenue when it comes to quoting reference sources. The rigorous fact-finding procedures of scientific inquiry have been completely ignored. 97 96

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2. It is instructive to investigate how the subject of focus booms is presented in the EIS in regard to references. On page "ii" of the summary, the following statement is made:

"As indicated, these focus booms impacted a fixed location and do not follow the aircraft flight track. The pressure increase can vary 2 to 5 times the overpressure level of the carpet boom at the location of focus. However, atmospheric conditions reduce the possibility of such increase to 2 to 4 times. Often atmospheric turbulence will cause a de-focusing effect that dissipates the booms completely."

It is hard to find more errors contained in a smaller number of words. This section is also repeated on 3-10 in the body of the document. Let us examine this statement one part at a time.

Firstly, "focus booms impact a fixed location and do not follow the aircraft flight track": the documents quoted in this respect are 78 and 98. 98, it turns out upon examination is really only referencing the primary source which is 78. So referring to 78 which is the original research on this topic and which is referenced by at least 6 other documents that we have found, we find the statement that "all military aircraft which make high load factor maneuvers produce focus and super-focus booms all along the supersonic airpath", and then later "the focusing zone is a line 300 feet wide and the superfocus occurs over a surface of 300 feet radius approximately". This means that instead of a focus boom occurring simply at one location, it occurs all along the flight path.

The next part of the statement quotes these documents as claiming that the pressure increase will vary from 2 to 5 times that of a carpet boom: quite the contrary, the original document states "a very sophisticated set of tests made in the French Flight Test Center show that the boom intensity is multiplied by 5 in case of focus and by at least 9 for super-focus. The chosen maneuver was a turn, because it localizes the focus along a continuous line." Further, "consequently it is important for us not to forget that in every case we measure a value of the focus factor lower than the actual value." Also, "we can only assert that the actual figure (of superfocus) is not less than 9."

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Next, there is the claim that atmospheric conditions reduce the possibility of focusing to a factor of 2 to 4 times and that the de-focusing effect sometimes completely dissipates the boom: this is contrary to what was found in the original research. The original research did measure focus on windy days: "the chosen value for the wind was the mean value between 2 soundings made just before and after the flight test", and later "the perturbations were due to the windy weather". In fact, other references not quoted here show that although atmospheric turbulence could de-focus one boom, they will on average not have any effect because in other cases they focus a boom that was not going to otherwise be focused. So that calling out the fact that the atmosphere sometimes de-focuses a boom without noting the companion effect of the turbulence that sometimes it does focus a boom that would not otherwise be focused is certainly misleading. On this same subject, reference 98: "In some instances, however, the atmospheric conditions are

such as to cause shock waves that impact populated areas." Further, "non-standard weather conditions involving extreme temperature inversions and unusual wind structures can result in the ray path situation shown... in this case the wave propagation speed profile in the atmosphere is such that the sonic booms which previously impacted short of the populated area are projected further forward and thus can directly impact the surface over an extended distance".

Reference 98 brings up another topic not addressed in the EIS at all. "On the other hand, the secondary sonic boom carpet and the disturbances experienced within it are not well-defined and only fragmentary observations and measurements are available. Propagation distances greater than 150 kilometers are common, and relatively large ground areas are exposed, but the significance from a community response standpoint is not well-defined." This is contained in the concluding remarks and simply cannot be overlooked. It is, however, not a topic that is addressed in the EIS.

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3. On page 3-10 the statement is made: "experience gained in the Sells MOA in Arizona where the number of booms heard does not average more than 2 or 3 a day" is based upon reference 53. Not quoted from the introduction to reference 53 is the following statement: "The information in this table should not be treated as hard data because it is based on leading questions, it was obtained through an interpreter for the most part and was derived from cryptic notes, hurriedly made after each conversation period".

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4. On the bottom third of page 3-10 and continuing to the middle of 3-12 is a long series of quotes from reference 99. This reference is to the Air Force's own sonic boom expert, Galloway, who also was the author of reference 94. The EIS fails to point out that all supersonic boom exposure levels as expressed in CDNL values have been calculated from reference 94 and not from reference 99 which was written two years later. In fact, the EIS misrepresents the tone and purpose of reference 99 by failing to quote appropriately.

The subject of reference 99 is "research recommendations", as indicated by its title. Galloway speaks at length about a program to collect test data in a supersonic area and continues: "Upon completion of the measurement program, the results should be used to modify the CDNL prediction program as necessary. It may turn out that an entirely different modeling procedure may be advisable. Principal uncertainties in the prediction of human response are the choice of acoustical descriptor and the validity of a cumulative exposure measure such as DNL or CDNL for describing human response to randomly occurring, infrequent, impulsive noise events. Of equal uncertainty is the applicability of noise response information inferred from a suburban-urban population to people living in the very low population densities of rural areas most likely to be subjected to some booms from USAF operations."

Throughout reference 99 from the introduction to its conclusions, Galloway indicates that the Air Force does not now have adequate data to allow it to write environmental impact statements. Further, he recommends

a data collection procedure to remedy this problem. This is a key document since it is the Air Force's own sonic boom expert saying that the Air Force does not yet have the proper information which it needs for an environmental impact statement, and recommends how the Air Force should proceed to get this information.

Misrepresentations of reference material are so serious that I am considering taking this to the U.S. Air Force Inspector General's office. It appears that errors in the RDEIS have gone beyond being incompetent, to being fraudulent and in violation of the NEPA law. This document is an impossible basis for scientific inquiry.

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5. On page 3-15 the RDEIS quotes from Reference 92 which is from the U.S. Environmental Protection Agency, entitled "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare With an Adequate Margin of Safety". This obviously sounds like an appropriate document to reference. The RDEIS has chosen a relatively innocuous quote: "number of factors must be considered in predicting the effects of impulse noise on people". What they omitted to quote, however, was the following conclusion that EPA came to when they studied the effects of sonic booms: "Thus, the peak over-pressure of a sonic boom that occurs during the day should be no more than 35.91 Pascals (Ø.75 pounds per square foot) if the population is not to be annoyed, or the general health and welfare adversely affected." EPA presents a formula that shows that for 3 booms a day the acceptable boom overpressure should be less than Ø.5 pounds per square foot.

It should be obvious to the most casual observor that EPA-identified numbers such as the ones contained in the above quote are emphatically relevant to the case at hand. However, the RDEIS omits this information entirely. The Air Force plans to exceed the Ø.5 pounds per square foot by a large margin. From page "i" in the summary, "the average carpet boom will range between 2 to 3 pounds per square foot." Page 3-6 shows a table where 17% of the booms exceed 4 pounds per square foot. Added to this are the multiplicative factors that may focus a boom by as much as 2 to 5, or even up to 9 times, depending upon the atmosphere, canyon surfaces, and aircraft maneuvers.

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6. Reference 1Ø6 is a basic source for the RDEIS's assessment of community response. Although not quoted directly very often, it is a source of all of the figures for the "highly annoyed" people, is based on the results of the Oklahoma City test (References 9, 1Ø and b), and is quoted extensively in the appendix on page D-8. A sample: "at end of the test, 73% of the group felt they could learn to live with 8 booms a day indefinitely." The actual quote is "at the end of 6 months, about 1/4 of all the people felt that they could not learn to accept the booms (original emphasis). A graph is presented in the reference that shows the number of people that could not learn to accept booms was increasing through the period of the tests from 9% at the beginning to 17% in the middle to 27% at the end when the test was stopped. Not mentioned at all is the fact that many law suits, including a suit by the Oklahoma City Council had been started to force cancellation of this test.

Projecting the community response to an unending sonic boom exposure is probably inappropriate because the test was conducted in an urban area. However, the trend of annoyance at the end of the test is very important. The portion of the population who could not learn to live with the booms can reasonably be expected to increase even further than 27% if the test had continued. The percentage of the people at the end of the test who were "highly annoyed" was 56% and was also increasing. Neither of these observations were made in our RDEIS.

When these figures were used by CHABA (reference 106) and subsequently by our RDEIS, the definition of the term "highly annoyed" was changed so that it does not mean what you or I would expect. It was estimated (page 10) that 60% of the population would never complain about any governmental action no matter how annoyed they were. Consequently, the Oklahoma City test results were reduced by 60%. This cynical definition of "highly annoyed", excluding as it does those people that are highly annoyed but will not complain about a governmental action, is inappropriate as a basis for deciding adverse environmental impacts.

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7. The bottom paragraph on page 315 says, "CHABA has evaluated the hazard of pre-natal noise exposure and reports: "There is no conclusive evidence of detrimental effects of high intensity external sound in higher animals...". The RDEIS goes on to quote a paragraph from that document. The operative word, apparently, is "conclusive"; there may be evidence, but it is not yet conclusive evidence. The document states explicitly in its abstract, in its introduction, and in its conclusions, the following: "Questions asked were (1) What are the potential hazards of noise exposure? [to the fetus] (2) On the basis of current knowledge can reasonable limits be specified for conditions of noise exposure?... The following brief report reviews the research considered relevant by the working group, points out the problems and limitations encountered in this research and its evaluation, and concludes that, on the basis of available data, definite answers cannot be given to questions 1 and 2. Recommendations are made for further research."

This is an interesting case because the whole purpose of this document was to answer the Air Force's question as posed in the contract. The above quote makes it clear that answers are not possible right now and that further research is recommended. The NEPA law requires the Air Force to go ahead, in a case of significant adverse human environmental impact, and fund the additional research to get these answers. Instead, the RDEIS ignores the conclusions of the report and quotes an ambiguous paragraph which gives the reader an erroneous impression that CHABA has made a finding.

III. ERRORS OF CONCEPTUAL TECHNIQUE & ANALYTICAL METHODS

1. OBJECTIVE FUNCTION: As discussed briefly in the introduction, the Air Force has an unrealistic and meaningless statement of its objective for the proposed action. The entire RDEIS deals with numbers of sorties, but the stated purpose is to provide training to F-15 pilots. It is stated in several places that flying in Catron County would provide only 30 minutes of training out of an 84 minute sortie. This represents approximately 39 minutes of excess transit time when compared to flying in White Sands. This is a conservative estimate and the savings in transit time is probably greater. Therefore, a single sortie of 84 minutes flown over White Sands Missile Range would provide more than twice the training to an F-15 pilot in air combat maneuvers. This same reasoning applies to each and every alternative in the document and especially should be used in a cost benefit analysis as suggested later. The document as written becomes meaningless and defies any systems analysis when it talks of sorties instead of discussing training.

It is interesting to note that the number of sorties seems to have been determined by an arbitrary and possibly capricious method. Apparently the number of planes in the Tactical Fighter Wing (72) was multiplied by the number of working days in a month (20) and then again by the arbitrary assumption that 85% of these sorties must be supersonic. This leads to a figure of approximately 1200 sorties per month, of which it is claimed only 600 can be flown over White Sands Missile Range (although 900 sorties per month have been flown over White Sands as a "short-term solution" (page 1-4)). It can be seen that the derivation of sortie rates seems to depend upon the availability of planes rather than any particular training requirement for F-15 pilots. The meaninglessness of this figure becomes apparent when the "readiness rate" is taken into account.

The U.S.A.F. Directorate of the Budget has supplied me with the following: "fully mission-capable readiness rate as of October 1983 is 61.7%". The United States must buy 100 F-15's in order to have 61 of them capable of flying. In the case of Holloman Air Force Base and the 49th Tactical Fighter Wing, this would lead to an estimate that of the 72 planes based at Holloman about 28 of them would be incapable of flying a mission at any one time. When this factor is taken into account, the total number of sorties possible per month from the 49th Tactical Fighter Wing is 888 sorties. If 85% of these are supersonic then 755 supersonic sorties could be flown per month. Use of a measure such as sortie rate will lead the Air Force to an inefficient utilization of its resources and, without question, leads the reader of the RDEIS up a deadend road. The document must be re-written with the stated objective in mind: to provide the F-15 pilot with a certain required number of hours of training each month, not a specific number of sorties.

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2. ECONOMIC IMPACT MODEL: Reference 96 is an Air Force-sponsored study of 277 pages, intended to show the economic impact upon Catron County. The general methodology proposed is to study the impact of supersonic flight operations in 4 other areas and use the results to predict the impact on Catron County. The 4 areas chosen were White Sands Missile Range and the Sells, Desert, and Gladden MOAs. Nowhere in the document are the type of supersonic operations that were conducted over these areas described. One area, White Sands Missile Range, is all Department of Defense land or is under contract to the Department of Defense. Similarly, the Desert MOA is mainly Department of Defense land, including the "Nevada Test Site" where atomic bombs had been tested. The appropriateness of using these for areas as a model to predict the economic impact upon Catron County has not been justified.

One reason to doubt the suitability of these models for predictions about Catron County is that all of them have been overflown since World War II. How is it possible, one might ask, to see the effect of sonic boom operations where, on one hand, for two generations the model MOAs have been overflown, and on the other hand, Catron County is proposed to undergo a severe change, by introducing supersonic flight next year? On page 9-1 of the RDEIS, even the Air Force shows some appreciation of Catron County: "Due to the area's rural population and remoteness, area residents are accustomed to a life style free from the encroachment of many modern-day experiences. Area residents refer to the area proposed for supersonic flight as the "last unspoiled frontier". Some of the same residents see the proposed flight operations as government intrusion, interfering with their chosen life styles." All of the 4 MOA models are located in desert terrain as opposed to the forested, mountainous country which is heavily used for outdoor recreation. It is attractive to people around the country as a retirement community. From these observations alone it can be concluded that the 4 MOAs chosen as models are inappropriate.

Weakness in the MOA models is significant, but the weakness in the methodology is fatal. In each case, the economic health of the MOA community has been assessed by evaluation of county statistics. One example: page 143 of the reference (the economic impact study, Reference 6) shows "each of the counties under analysis in the White Sands, Desert, Sells, and Gladden supersonic military operations areas has a net gain in the number of residents since 1960 as well as since 1970...the number of employed people...the total and per capita personal income...the retail sales...the assessed evaluation of taxed property has increased very strongly". In its summary of its findings in the 4 active MOAs, this document concludes that everything is doing well.

However, closer examination shows, on page 81, that Gladden itself has 3 towns, each having under 100 persons, with Gladden "estimated to be 10 people". Use of county statistics leads the authors of this reference to use Maricopa County, which as shown on page 54, has a total personal income of just about $9 billion dollars. If this seems strange then page 44 should clear up any possible misconceptions: Maricopa County, which is used to analyze the economy of the Gladden MOA, has a population of 1,293,200, about 55% of the population of the entire state of Arizona. It happens that Arizona has large counties and the city of Phoenix is located in the same county as a portion of the Gladden MOA. In fact, the city of

Gladden is on the opposite side of the county from Phoenix at a distance of approximately 94 miles. It is obvious that the people of Phoenix are not being subjected to whatever sonic booms occurred over the Gladden MOA. Further, the very idea of representing the economic impact of sonic booms to this model MOA where Gladden itself has a population estimated to be 10, by the economic statistics gathered from a county that includes Phoenix with a population of 1.3 million, is simply absurd.

To show that this is not an isolated example, I will take one more of these model MOAs as an illustration. The Sells MOA has a population estimated to be a little more than 8000, while the population of the county is 461,700. Indeed, this is another county which has a major city at the other end, that is, Tucson. Tucson is about 80 miles away from the center of the Sells MOA.

It is hard to accept the failure of methodology, by which I mean the use of county statistics to estimate the impact of sonic booms on the model MOAs. How is it possible to explain this kind of misleading use of statistics in an innocent manner? One conclusion is inescapable: the reference document 96 and consequently the section entitled "Economic Considerations" and the section entitled "Socio-Economic Conditions" and the page 3-27 through 3-31 inclusive in the RDEIS are without value. Comparisons are continually made back to the "4 control MOAs" which were discussed above. Since these models are unsuitable to begin with and since the methodology used is inappropriate, the conclusions are unjustified. It is anticipated that supersonic flight over Catron County would introduce a great and possibly devastating economic impact upon the county and its residents. The environmental impact statement must be re-written to address this impact.

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3. SONIC BOOM EXPOSURE MODEL: The idea of using a single maneuvering ellipse comes from examination of the Oceana study but does not satisfy the NEPA requirement to do a worst case analysis. As is discussed elsewhere in this report, the Air Force is seeking a waiver for supersonic flight in a 1700 square mile area and is not limited to flying in the 170 square miles of the ellipse. In addition, examination of the Hill Air Force Base draft Environmental Impact Statement for the Gandy Range extension shows that Hill Air Force Base can easily fit 2 ellipses within that supersonic area, not one. They estimate that each ellipse has a carrying capacity of 400 supersonic flights per month for a total of 800 supersonic flights in the Reserve MOA. Even so, I want to go ahead and illustrate the flaws that have occurred in using the Oceana data to calculate sound exposure in this single ellipse, for the case of 300 sorties per month.

The referenced document is 94 which is a control report by William Galloway on "Development of C-Weighted Day-Night Average Sound Level Contours for F-15 Air Combat Maneuvering Areas". This is based upon simplified formulas for calculations of carpet boom exposure levels, certain assumptions about focusing booms and data from the Oceana MOA study. The Oceana study is a dubious model of operations over Reserve; for instance, it takes place over the ocean and not over the mountains. On page 22 of the reference a chart is given of the sonic booms created during 21 sorties in the Oceana MOA. Approximately one single day of flight is statistically of no value at all. It is not possible with one

data point to compute the expected distributions and variations that would occur from one day to the next in the use of the Reserve MOA.

The following discussion, while somewhat technical in nature, is nonetheless important since the conclusion is reached that the sonic boom exposure levels are grossly underestimated. The consequent estimate of C-weighted day-night noise levels exceeded all standards and are well into a region of unacceptable noise.

The Oceana test was conducted in an area that had navigational beacons located on both sides of the ellipse. This currently would not be the case in the Reserve MOA. Use of Oceana as a model for Reserve is certainly questionable.

The first step in using the Oceana model was the determination that of the 21 sorties, 56 booms were created, and out of these 56 events, 18 would reach the ground. If we are to believe that Oceana is an adequate model for Reserve, then the use of sea level in Figure 4 on page 22 as the origin of the cutoff is inappropriate. The mistake made is that 18 booms are assumed to reach sea level and then are subsequently adjusted up to the overpressures that would occur if the ground were at 5000 feet. If, however, the ground is assumed to be at 5000 feet to begin with (or I choose it to be at 7000 feet, since that is more representative of Reserve) then the dotted line on Figure 4 is raised 7/10 of an inch. This means that of 56 sonic events, 24 of them would reach the ground and not 18. Instead of 0.8 booms per sortie, there would be 1.14 booms per sortie. Of course using this higher figure upsets the entire sonic boom exposure analysis and also the calculated C-weighted day-night noise levels.

The next error is where the training time was neglected. The training time at Oceana was 20 minutes per sortie; training time assumed at Reserve is 30 minutes per sortie which is 50% greater. It is reasonable to assume that the number of sonic boom events would also consequently be 50% greater. This raises the number of booms reaching the ground from about 24 to 36 and with or without the previous adjustment (in the paragraph above) will upset the entire sonic boom exposure analysis in the RDEIS.

The next error is an unjustifiable resort to use of averages instead of individual calculations to the carpet boom exposure of the sonic boom events that will hit the ground. A simplified example might help explain what I mean: When there is a threshold value being considered, in this case the Mach cutoff, above which elevation sonic booms will not hit the ground, use of averages can be misleading. For instance, if we were to assume that the cutoff elevation at a certain Mach speed was 10,000 feet and that all planes were going at this same Mach speed but half of the planes were at 100 feet above the ground and the other half of the planes were flying at 30,000 feet above the ground, then the average flight level is approximately 15,000 feet, which is above the assumed 10,000 feet cutoff level. This would lead one to assume that no booms were going to hit the ground on the average; however, in reality, since half of the planes were flying at only 100 feet off the ground, very fierce booms would be felt, produced by half the planes in the example.

The use of an averaging technique in this case (root-mean-squared method) creates a bias when there is an anomalous data point, such as the plane that was flying at Mach 1.5 at 42,000 feet. Galloway has discarded

this data point because he was using an averaging method. In such a small test as this, discarding one out of 18 points means throwing away almost 6% of the data. There is no reason to assume that this flight will never re-occur and, in fact when looking at the wide variation of sonic boom events that occurred in Oceana, there is every reason to assume that this flight might be representative of future high level escapes during a dogfight. If the effect of all sonic boom events were calculated individually then their sum would be a better estimate of what would have been heard on the ground than use of any kind of averaging technique.

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Because of the nature of sonic boom cutoff speeds and the lateral cutoff distance, use of an average tends to minimize the sonic boom exposure. With detailed analysis we would increase these exposure levels by considering each and every sonic boom event.

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Another result of recomputing the sonic boom exposures individually is to change the CSEL, the C-weighted sound equivalent level as calculated in equation 9. It is likely that individual boom event calculations would yield sonic boom exposure area greater than the 28 square miles assumed. If this were the case then the CSEL may increase substantially from the 104 decibels given in equation 9.

Equation 10 involves a factor of 5/7 that is entirely unjustified. The rationale for using 5/7 is that sonic booms are expected in the Reserve area only 5 days out of every week. However, the sonic boom exposure levels as measured by CDNL are all published on a 24-hour basis, not on an annualized basis. The noise in each day of the week should be judged day by day. This is consistent with all of the reference documents, particularly those from CHABA (reference number 106), "Assessment of Community Response to High Energy Impulsive Sounds". Elimination of the 5/7 factor increases the sonic boom exposure by 20%. This factor itself, or in combination with the added factors from the above paragraphs, tends to elevate the expected CDNL values by a large amount.

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The next error made in this document is consideration of superbooms. Firstly, an assumption is made that a superboom will be one out of every 20 booms that reach the ground. It is my conclusion that not only is this statement made without any data but that it is incorrect. Galloway defines a superboom as having a factor of 4 increase in overpressure. This is in fact not a superboom but a focus boom, and a focus boom is created every time an aircraft breaks the sound barrier. This means that for every one of the carpet booms there must be at least one focus boom. This would be true even if the planes stayed in level flight. However the whole purpose of this exercise is to perform air combat maneuvering, which involves turns and pushovers, dives and climbs, all of which can create focusing effects. Additional focusing effects are created by the terrain in the Catron County area. Larger booms are also created when one aircraft passes another aircraft, which of course will happen all the time in a dogfight. The original research on focus booms (reference number 78) reports that focus booms occur in a continuous line under the flight path, so the assumption made in reference 94 that focus booms would only reach the ground in the ratio of one focus boom per 20 carpet booms is unjustified. A better assumption would seem to be that for each and every carpet boom there will be at least one focus boom and probably more. The focusing effects in air combat maneuvers are quite severe.

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Changing the assumption will also change the likelihood of hearing

booms. The overpressures and the number of booms heard would change. Some of these booms would be projected outside of the area since they do not occur beneath the flight path of the plane. This means that even if we were to believe that all of the maneuvering could take place within the ellipse, sonic booms would travel a great distance outside of the ellipse because of the focusing effects. Incidentally, the boom I referred to before occurred at a Mach of 1.5 and an altitude of 42,000 feet. Booms of this sort would travel a considerable distance, an estimate being somewhat in excess of 30 miles across. I estimate from the figure on D-3 of the RDEIS that it was approximately 27 miles in length. Thus about 800 square miles would be subjected to this boom.

Another error in this analysis (reference 94) was pointed out by Galloway in his document 2 years later (reference 99). The formulas for calculating sonic boom overpressures are for straight and level flight and that when a plane is in a dive the effective height of that plane is lower than its actual height and its effective speed is faster than its actual speed when using these formulas. Analysis of air combat maneuvers must be performed before determining which booms would be heard and which are above cutoff. A most significant effect would be a substantial increase in sonic boom overpressures for planes that are diving to escape in a dogfight and are going toward the 15,000 foot mean sea level floor. The effective elevation of the plane in a 30% dive under these circumstances would be somewhere just above 12,000 feet and the Mach speed would increase to somewhere close to 1.9. The overpressure calculations would show a carpet boom in excess of 6 pounds per square foot. It should be emphasized that this is not a focus boom but actually a carpet boom that spreads over a much wider area and is much more intense than booms that would be calculated by the methods used in reference 94.

The above effects necessitate a complete re-writing of the section on sonic boom exposure and calculation of CDNL levels. Before leaving this subject I just want to note that the estimates of number of booms to be heard in one day on page 3-9 are limited to carpet booms and do not consider the large number of focus and superfocus booms that would be created by air combat maneuvers. Table 3 on page 3-6, which purports to show the expected carpet boom overpressures, is entirely erroneous because it assumes a normal distribution of booms. Examination of Table 2 just above it, and based upon this small sample of booms in Oceana, normal distribution of boom overpressures can not be defended and consequently use of standard deviations to express the expected deviation of boom overpressures from the mean is groundless.

It may be interesting to note that even without any of the errors noted above, the assumption stated on page 3-9 that the center of the ellipse will get an average of 4 booms a day would mean that the EIS should have drawn in a smaller ellipse within the maneuvering ellipse to show the higher intensities of sound delivered in this central area. Calculations of that central area, assuming the mean number of booms hit it each day, yield a CDNL level of 68.9. Impulse noises are penalized by approximately by 5 dB when compared with DNL A-weighted standards; this puts the noise levels of the center of the ellipse (74 DNL) into a completely unacceptable range even without changing any of the calculations that are indicated by the preceding paragraphs.

In conclusion, the analysis of sonic boom exposure and C-weighted day-night noise levels is grossly inadequate and tends to underestimate by

a very large margin the sound that would be heard in a single ellipse. Even 300 sorties a month would produce unacceptable sound levels in that region. Not only must this analysis be redone, but since its results are used throughout the RDEIS from beginning to end, the entire document must be re-written to account for the much higher noise level impact. The document cannot form a basis for assessing sound exposure impact.

IV. OMISSIONS OF RELEVANT SOURCE REFERENCES

The RDEIS refers to about 10 documents that relate to human health. Since this is such an important possible adverse environmental impact, a more vigorous literature search should have been done. Dr. Worthington had come up with about 85 additional references when he did his search in 1978. He said to me, personally, that there have been about a hundred studies since that date. The Air Force seems to have missed several important studies relating impulse noise to health effects and the EIS cannot be permitted to stand on Dr.Worthington's now-outdated commentary. In fact, the NEPA law requires more than a literature research and says that if there are gaps in relevant information or scientific uncertainty that the agency shall either supply the missing information or do a worst case analysis. A few examples of the kind of document the Air Force has missed are given below.

1. (Catron County Document 16): "As human health is endangered by single noise events as well, it seems justifiable to demand an assessment of noise not only by calculated equivalent continuous noise level, but also by limits for single noise events which must not be exceeded even if the continuous level is below the criteria fixed in standards or laws. It is obvious, too, that single noise events whose intensities exceed established limits are as important as equivalent continuous sound levels." 117 117

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2. This is Catron County Document 13 which was published in 1981 and has been cited as a landmark original research on the effect of noise. "We have demonstrated for what we believe to be the first time in a carefully controlled experiment that moderate levels of realistic noise, presented at appropriate times throughout the day, can produce sustained elevations in blood pressure without producing significant changes in auditory sensitivity." (The Air Force says that if there is no hearing damage then there would be no other physiological damage.) "...We have provided evidence, based on a primate model, that these two categories of event may occur independently in humans exposed to moderately intense noise over long periods of time. Further, we have demonstrated that noise effects do not necessarily dissipate when the noise ends." 118 118

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3. The RDEIS quotes Reference 92 which was written in 1974, that "behavioral habituation is normally seen in humans" when exposed to repeated impulse noise. This quote, however, does not claim that physiological habituation is seen, and many studies have shown that there is no habituation possible. One of these, Catron County Document 22, 119 119

describes a study conducted in a laboratory where sleepers were interrupted by loud noises. The first several days, of course, they awoke when the loud noises began. After several days all of the subjects were able to sleep through these loud noises; they seemed to have habituated. The researchers were quite surprised to find, however, that on a physiological level the subjects had not habituated at all.

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When measuring heart rate, adrenal secretions, etc., the study shows that the fifteenth day measurements were the same as the very first day measurements. The researchers conclude that no physiological habituation can take place. Other studies relate this stress on the organism to a multitude of diseases and disorders. This study is just one example of where recent studies reveal much more about the possible adverse health effects of impulse noises than do documents from the 1960's or early 1970's. Of course, this is not surprising since it is well known that scientific research has made great strides in the very recent past. The RDEIS cannot be allowed to rely on outdated research, particularly when human health effects are being considered.

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4. Another document that has been omitted from the Air Force list of references is a most obvious one: "Transcript of the Public Hearing Concerning the Sells, Arizona, MOA" in 1979 (Catron County Document 20). Why is this such an obvious document? Casual reading of our RDEIS shows it to be almost without exception theoretical in its treatment of noise exposure. However, if an agency wanted to really find out the effects of sonic booms upon people, wouldn't it be reasonable to ask people that had been subjected to just such noises. There do exist. Some people who have been subjected to sonic booms: the Papago Indians in southern Arizona. I have questioned the lawyer who had represented the Papagos, and he has many horror stories to tell about the effects of sonic booms. Most of these are well-documented cases. This testimony is available to the Air Force because they transcribed it in a public meeting that they conducted in March of 1979. They have seen fit, however, in this RDEIS, to ignore the complaints and heartache expressed by the people in Sells, in favor of theoretical mathematical modeling.

V. OMISSION OF IMPACTS AND ALTERNATIVES

Several subjects are not discussed at all in the RDEIS, but are necessary for an understanding of the environmental impacts or an analysis of the proposed action.

1. RADIO WAVES: We are fortunate to have the world's largest radio telescope, located several miles from the supersonic flight area. The Very Large Array (VLA)is an extremely sensitive receiver of radio waves from the stars and galaxies, some of which are billions of miles distant. When a fighter plane takes evasive action in the course of a dogfight, it often employs "ECM", electronic countermeasures. These are sophisticated techniques employing radio waves intended to deceives the opponent's target acquisition radar or weaponry. It is reasonable to assume that the proposed use of this area for air combat maneuvers will significantly increase the amount of electromagnetic radiation (radio waves) for the area. The choice of this location as a site for the VLA was predicated among other things upon an environment relatively free from extraneous radio wave interference. No discussion or analysis of these effects is presented in the RDEIS.

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2. INTERFERENCE WITH GENERAL AVIATION: The law requires that the agency submitting a Draft Environmental Impact Statement solicit comments from persons or organizations who may be interested or affected. One of these organizations which had not been informed is the Aircraft Owners and Pilots Association (AOPA) representing many of the interests of general aviation. Following is a statement by the AOPA:

"The Aircraft Owners and Pilots Association objects to the concept of a supersonic operations area within existing MOAs in the interests of aircraft safety. AOPA represents more than 260,000 pilot members who fly general aviation aircraft for business and pleasure. We are the world's largest pilot organization and our members are the largest group affected by airspace proposals.

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"Historically a military operations area is a see-and-be-seen area of airspace where both civil and military aircraft can operate under visual flight rules (VFR) conditions without control. MOAs are depicted on general aviation charts to alert pilots to the possibility of subsonic military operations within that airspace. The proposed supersonic operations area completely negates that see-and-be-seen concept. It would be virtually impossible for the pilot of a general aviation aircraft to see an approaching supersonic fighter and successfully taking meaningful evasive action. And, the chances of military pilot flying at supersonic speed seeing another aircraft in time to take any evasive action are also

remote.

"In essence, AOPA sees this supersonic airspace proposal as an airspace grab promoted outside the regular avenues of existing legislative procedure and that by its very nature it would create a restricted area. We feel that the basic concept of a supersonic MOA is unsafe for all users of the airspace." 121 121

The present RDEIS presents no discussion or analysis of the effects of the supersonic training area upon general aviation.

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3. SIMULATION: Aircraft simulators are extremely sophisticated and are capable of replacing actual flight training in many cases. Lest anyone doubt this, look at our space program and our landing on the moon which was done only using simulators for training. In fact, simulators can provide training that is unavailable in the aircraft itself. For instance, it is possible to fight 8 aircraft at a time; or it is possible to fight from a damaged aircraft, one for instance with a hydraulic system that has failed. Another example would be to fight from an aircraft going at Mach 2 or even Mach 3, the upper capability of an F-15. Or to operate the aircraft at 100 feet elevation above the ground instead of 7000 feet above the ground. There is no discussion of simulation within the RDEIS.

Colonel Stamm of Holloman Air Force Base replied to a question about simulation that, yes, they do use simulators to train F-15 pilots but that the simulator that they have at Holloman is presently in use 12 hours a day and no more time is available on it. This kind of answer indicates a whole new alternative to supersonic flight that is not discussed in the RDEIS. For instance, maybe the Air Force should consider buying a new simulator for Holloman Air Force Base. 122 122

It is not being suggested that the pilots stop all flying in an F-15; rather, that some number of hours of additional training can take place in a simulator and not in flight over people. It is most likely that this would be the most environmentally acceptable alternative and by far the least expensive one for the Air Force. If the 300 flights proposed for Reserve are converted into hours of training, only 150 hours of training has to take place each month. At twelve hours a day, a simulator may be able to provide even superior training in a matter of 2 weeks, or alternatively can provide twice the amount of training in a period of a month. This obviously deserves further consideration and, in fact, any rational evaluation of alternatives requires this type of information.

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4. DEMOGRAPHICS: Most studies that estimate the effects of sonic booms or noise on human health use healthy young human volunteers. Since the Air Force proposes to inflict high intensity sonic booms on a general population for an extended and indefinite period, there should be a discussion of the demographics of the area. For instance, how many people are in ill health? How many people are on shift work and sleep during the day? Any infants sleep during the day? How many women are pregnant? How many cattlemen are likely to be working with animals during the day? This is the kind of information necessary if there is to be any reasonable attempt to predict the effects of sonic booms upon this particular 123 123

population. Remember, general statistics do not apply in any particular case, and this is most obviously the case when the statistics are collected from urban areas or from laboratory studies using healthy subjects. 123

For example, a statement that distills the essence of this Air Force proposal could be the following: "the Air Force plans to sneak up 2 or 3 times a day, without warning, upon each and every seventy-year-old person living in the Reserve area and say Boo!" Of course the Air Force does not plan to discriminate against seventy-year-olds but will startle (with sonic booms) people of all ages. But how many seventy-year-olds are there that will be startled day after day? A discussion of demographics is imperative.

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5. WORST CASE ANALYSIS OF SONIC BOOM EXPOSURE: Section 3 of the RDEIS presents what the Air Force considers its most likely use of the area for supersonic training.They plan to do most of the supersonic flight in a relatively small area in the southeastern portion of the supersonic area. However, they are seeking a waiver to fly supersonically in the entire area. I am not convinced even that their most likely case is very likely: insight may be gained from a concurrent draft environmental impact statement for the Gandy Range as proposed by Hill Air Force Base in Utah (Catron County Document 26). On page 44 of that document there is a map of the proposed supersonic flight area with the maneuvering ellipses drawn. Considering the area just north of Goshute Indian Reservation, it can be seen that 4 ellipses are proposed for an area of approximately 2900 square miles. This gives an average of approximately 730 square miles per ellipse. Since the area proposed in the Reserve MOA is approximately 1700 square miles, it can easily accommodate, by this method, 2 ellipses. Since the capacity of each ellipse as stated on page 41 is approximately 400 supersonic sorties each month and since our RDEIS anticipates the possibility of flying 600 sorties each month, it becomes quite likely that 2 ellipses will be used instead of one as implied on page 4-16 of our document. In any case, the NEPA law requires that a worst case analysis be conducted when there are significant factors concerning human health that have not been answered. 124

If the Air Force were to seek a waiver to be allowed supersonic flight only within their ellipse, their single ellipse, they would have more credibility. However, far from an area of 170 square miles, they are asking for an area of approximately 1700 square miles for supersonic flight. Because the Air Force seeks a waiver for the entire 1700 square miles, a more extensive analysis of the effects of supersonic over the entire area must be performed.

In addition to this, any reading of the references would indicate that sonic booms travel beyond political boundaries. So an area surrounding a flight area must also be included in a worst case analysis. The surrounding area would obviously be subject to booms and would be impacted directly, as well as in many other ways, particularly in decreased land values. This extended area is indicated in the Air Force-sponsored economic impact study (Reference 6, page 148) where a 15-mile boundary is considered impacted by the proposed action. This additional area, incidentally, is considerably larger than the area that is being proposed for supersonic flight. Not only is this outlying area subject to carpet 125

booms but is likely to hear focused booms, which are projected outward from the groundtrack of maneuvering fighter aircraft.

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6. OTHER SUPERSONIC AIRCRAFT: on page 1-10 of the RDEIS, it is mentioned that other aircraft may use the airspace and participate in air combat maneuvers with the F-15. Presumably, since Holloman Air Force Base is claiming that they need 1200 F-15 flights per month, any participation by F-4's or A-7's or other supersonic aircraft would add to this monthly sortie rate figure. Discussion should be provided that would take into account these added sorties.

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7. THE CATRON COUNTY AIRSTRIP AT RESERVE, NEW MEXICO: This newly paved airstrip represents a substantial investment by the local government and the associated Council of Governments. The effects of changing the status of the airspace above it should be discussed in a practical, rather than legalistic manner. For instance, supersonic flight within a MOA overlying the airstrip may well discourage its use.

The FAA experience in the Desert MOA in southern Nevada can serve as a practical example: since aeronautical charts did not specify that the Desert MOA contained supersonic flight, local general aviation would fly across it; the result was "a very large quantity of near mid-air collisions" (quote from the Director of Airspace, AOPA, Washington, DC). There were so many "near misses" that the local FAA office began to show a video tape of the Air Force supersonic dogfight misson to the area pilots' groups. The pilots stopped trying to cross the MOA, and near misses have almost stopped. It is important to understand that supersonic dogfighting was shown to be a very hazardous activity for general aviation, and that the MOA is now being treated as a restricted area, even though the Air Force maintains the fiction that it is open to all general aviation. In a similar way, the Reserve Airstrip in Catron County may become defunct if the Reserve MOA is authorized for supersonic dogfights.

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8. COST BENEFIT ANALYSIS: Some isolated attempts at discussing costs appear in Section 4 and in Section F of the RDEIS. Nowhere is there consistent exploration of the cost benefits of all the alternatives, including most particularly the alternative of flying in White Sands Missile Range on weekends. Cost benefit analysis would also allow a better evaluation of other alternatives such as the Pecos Military Operations Area which has certain high altitude jet routes above it that would have to be moved if F-15's were to conduct supersonic air combat maneuvers there. A second objection to Pecos is that it has a population of 2000 people, but one suspects that this population is at one extreme of the MOA; if the Air Force were to use its mathematically-defined ellipses they could certainly locate that ellipse in an unpopulated area. However, the point here is that a cost-benefit analysis is quite commonly done for these kinds of alternatives and may well serve as a better vehicle for systems analysis than the casual and unquantified observations made throughout Section 4.

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9. EFFECTS ON VISITORS TO THE AREA: There are 2 large elements of the population that will be affected by the proposed supersonic flight area that have not been considered. The first of these, which had been mentioned in 1979, is the presence of the camp for deaf children which reportedly attracts more than 1000 children each year for horseback riding. The other major element of the population are visitors to the National Forest. In a letter from the Gila National Forest which is reproduced on pages 10-23 through 10-27 and dated October 1979, the Gila National Forest Supervisor indicates that there were at that time 60,000 visitor-days annually (where a visitor-day is one person visiting the forest for a 12-hour day), 30,000 of which were dispersed throughout the region. There is a prediction that this number will substantially increase in the near future. 129 129

No update of these figures is present in the current RDEIS and no discussion or analysis is presented to account for the sonic boom effects on this transient part of the population. It is quite possible that 10,000 or 20,000 people visit this area for recreational purposes and would be affected by sonic booms. Both of these groups, the visiting children and the National Forest visitors, should be considered when assessing the adverse human impact of conducting supersonic flight in this area.

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10. BALD EAGLE NESTING SITES AND HABITAT: Page 10-27 indicates 2 areas identified by the Gila National Forest as "additional endangered species reproduction habitat areas", one of which lies directly beneath the proposed air combat maneuvering ellipse. The possible impact of sonic booms on a nesting bald eagle or potential nesting sites for the bald eagle is not discussed in the RDEIS, beyond merely the mention that Centerfire Bog is not under the maneuvering ellipse. 130 130

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11. AIR SPEED AND NAVIGATIONAL VIOLATIONS: It has been stated to me privately by 3 different experienced sources, and it is also present in public testimony, that no matter what the environmental impact says, violations will occur in actual practice. Young pilots in the heat of pretended dogfight will either exceed authorized speeds or fly below authorized flight levels or will fly outside of the indicated maneuvering ellipse or even outside the entire authorized supersonic area. A case in point is shown on page D-32 where one pilot in this Oceana test flew higher and faster and longer than anybody else (and flew entirely outside of the maneuvering ellipse). 131 131

Dr. William A. Shurcliff is a physicist who was active during the SST debates and wrote a book on the subject of sonic booms. He states in a letter to Catron County: "Long experience with Air Force tests, etc., of 10 years or so ago show that the pilots wander very far from the prescribed course. Experience shows, also, that they deny doing this; their supervisors deny it; damage claims are rejected." This entire subject is ignored in the RDEIS and must be addressed.

It is unknown with what frequency violations would occur but it is possible that substantial and significant impact would be felt by such

violations. It has happened several times that spectacular damage resulted when a pilot got carried away. For instance, I am quoting now from Catron County Document 8: "At the Uplands Airport at Ottawa an F-104 supersonic fighter plane flew at 500 feet above the multi-million dollar terminal building, producing a sonic boom that broke most of the windows, twisted metal window frames, and jarred loose insulation cemented to the underside of the roof. The damage was estimated at $500,000.00." 131

A similar incident occurred at the Air Force Academy: "In May 31, 1968 an F-105 plane flew at supersonic speed 500 feet above the Air Force Academy at Colorado Springs, Colorado. The sonic boom broke $50,000.00 worth of windows and showered broken glass onto persons attending graduation ceremonies. Fifteen persons were injured. (New York Times, June 1, 1968, front page article with photograph of damage)" The possibility of extensive damage from violations is significant and surely must be discussed in the environmental impact statment. 131

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12. WEEKEND FLYING AT WHITE SANDS MISSILE RANGE: Page 4-17 of the RDEIS purports to discuss this subject but actually does not. Catron County in 1979 proposed as a viable alternative the utilization of the airspace over White Sands Missile Range for an entire seven-day week. This is possible to do while maintaining a five-day work week for any one pilot. Information is given on this page that at least 45 sorties could be conducted on a weekend day, thus allowing 390 sorties to be flown over White Sands Missile Range. This section of the document, however, seems to be construing the Catron County proposal to mean that the Air Force should fly on Saturday and Sunday instead of flying on 2 week days. This was not the intention at all. A full discussion of utilization on a seven-day-a-week basis of the White Sands Missile Base airspace is required, since it is an alternative that is least costly to the Air Force and conforms to the Air Force commitment expressed in Reference 15 (the Environmental Impact Statement for the F-15 Bed-down at Holloman Air Force Base), to conduct all supersonic flights over the WSMR. 132 132

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13. CHANGING THE PRIORITY OF F-15 VERSUS T38 IN WSMR: Careful reading of the RDEIS suggests the possibility that the shortfall of sorties over White Sands may be an artifact of Air Force policy rather than any new development. The original beddown document for the F-15 and T-38 anticipated this same number of supersonic flights and yet was able to promise that they would all be conducted over White Sands Missile Range. The RDEIS seems to indicate that there is an agreement between the Tactical Fighter Wing and Tactical Training Wing, that any sortie time available over 600 sorties per month in White Sands Missile Range will be given to the Tactical Training Wing. From page 1-13: "No more than 600 F-15 supersonic sorties can be expected in the White Sands Missile Range airspace since any excess air time is scheduled for the shorter range T-38's." 133 133

The Air Force implies the T-38 needs White Sands to practice delivery of ordinance and gunnery practice. It is quite likely that this is a very small fraction of the training in a T-38 and that much of the actual training is a very low impact activity (in contrast to F-15 supersonic training which has been shown to be a very high impact activity).

Adjustment of the relative priorities exercised by the F-15's versus the T-38's at White Sands may cure this sortie shortfall without further to-do.

It is not unknown for a government agency such as the Air Force to create shortages that don't exist by arbitrary policy decisions. The information necessary to make analysis of this kind of alternative (T-38 versus F-15 priority change) is absent from the RDEIS. Discussion and analysis of this alternative must be included in discussion of alternatives. The section beginning on page 4-15 entitled "Priority Change" ignores this entire possibility. 133

It can be shown that any alternative which allows the Air Force to fly 300 sorties in White Sands instead of flying them in Reserve is going to save more than 2300 extra hours of F-15 transit time. This is time spent simply driving the F-15 to its training area beyond the time necessary for the F-15 to get to White Sands. Using figures obtained from the U.S.A.F. Directorate of the Budget, a savings is possible of $24.9 million dollars annually by flying in White Sands. This amount represents operational costs only, exclusive of amortization of the F-15 aircraft, and could be used for beneficial training of F-15 pilots (instead of driving the plane back and forth across the state of New Mexico). 133

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14. GROUND INSTALLATIONS: The Air Force usually conducts supersonic training in a fully instrumented air combat maneuvering area. This often involves up to 50 separate radar installations which are necessary to keep track of what is happening during each training session. This entire subject is omitted from the RDEIS. If the Air Force does not intend any ground installations, they should specifically say so. If ground installations are anticipated some time in the future, now is the time, in the environmental impact statement, to assess the possible impact on the environment from installation of the instrumented range equipment. 134 134

OVERALL CONCLUSIONS

Enormous power is entrusted to the Air Force by the American people, nd carries with it an obligation to use that power very carefully. Even f no other law existed concerning this matter, the Air Force owes the itizens of the United States the courtesy of honest and forthright reatment. In this case there is a federal law, the National nvironmental Policy Act, whose regulations state in part: "Agencies shall nsure the professional integrity, including the scientific integrity, of he discussions and analyses in environmental impact statements." The Air orce has failed to meet this obligation.

The revised Draft Environmental Impact Statement for the Reserve ilitary Operations Area is rife with errors from front to back including isstatements of fact, misuse of references, inappropriate methodologies, naccurate analytic techniques, and omissions of relevant literature and missions of relevant subject discussions. As a systems analyst I have at across the table from generals in the Pentagon who trusted me to give hem an objective analysis of Tactical Air Command operations. I am doing he same kind of objective analysis here. I find it impossible to do any eaningful analysis based upon the information presented and isinformation presented, omitted or misstated in this environmental mpact statement.

In many ways this impact statement is worse than nothing at all, since t has been written with an intent to minimize or obscure detrimental nvironmental impact. The types of errors present in this RDEIS in such uantity can admit of no purely innocent explanation. Ultimately, it may e up to the Air Force Inspector General's office to determine whether any ndividual can be proven to be at fault Meanwhile, it is clear that the ocument itself is of no value to the environmental impact analysis rocess, and is so inadequate as to preclude any meaningful analysis.

CC-13 Noise Raises Blood Pressure Without Impairing Auditory Sensitivity From SCIENCE Magazine, Vol. 211, pg 1450, 3-81

CC-14 NEPA Rules and Regulations by US Govt Printing Office 1979

CC-15 Community Response to Blasting 1-83 J.Acoust.Soc.Am.74(3),9-83 by Sanford Fidell, Richard Horonjeff, Theodore Schultz & Sherri Teffeteller;BoltBeranek & Newman,Inc,PO Box 633, Canoga Park, CA 91305

CC-16 Non-Auditory Effects of Noise Physiological and Psychological Reactions in Man by Gerd Hansen of Inst. Hyg. Arbeitsmed, University of Bochum, Germany

CC-17 Personal Letter to Suedeen from William A. Shurcliff,Physicist 10/80 Retired, Home Phone (617) 876-0764; 19 Appleton St;Cambridge,MA 021

CC-18 Personal Letter to Steve from Papago Indian Agency, (*1/80*) Sells, AZ 85634 (Verna N. Morrow, Acting Principal for Della Williams, San Simon School, Star Rt. 1 Box 92, Sells,AZ 85634)

CC-19 The Old EIS for our MOA formerly called Morenci now Reserve

CC-20 Air Force Representatives at Public Hearing Sells Airspace Presentations at Public Hearing, Photos of aircraft, Organizations' presentations, clippings, Legal Services, 3-79

CC-21 Jet Stream - Sonic Boom Phenomena, Tucson, Arizona, 4-75 by Richard A. Wood, Official in Charge, Weather Service Ofc, Tucson, Arizona; from WEATHERWISE, Vol 28,#4,8-75,American Meteorological Society

CC-22 Noise Can Be Hazardous to Our Health 6-82, by Janet Raloff from SCIENCE NEWS, Vol. 121,pg 377

CC-23 COMMENTS on Revised DEIS; CRITIQUE of section 3.2.3.1 Sonic Boom Impacts on People 10-83 by Richard D. Worthington, Ph.D., Associate Professor of Biological Sciences; Home:740 Tepic;El Paso,TX 79912

CC-24 Questions and Comments regarding the RDEIS for Supersonic Flight Operations in Reserve and Valentine MOA; Richard Bargen, M.D., Home: Box 1445; Fallon, Nevada 89406 10-83

CC-25 Forest Service Comment Letter to Alton Chavis, TAC, 9-83 Langley AF Base, VA 23665 written by M. J. Hassell, Regional Forester, 517 Gold Avenue, SW; Albuquerque, NM 87102 (Region3)

CC-26 DEIS: Gandy Range Extention & Adjacent Restricted Airspace as an Area for Supersonic Fight Training Hill AFB, Utah; July 20, 1983; Environmental Planning HQ AFLC/DEPV, Wright-Patterson AFB, Ohio 45433

REFERENCES QUOTED IN CATRON COUNTY ANALYSIS OF RDEIS

CC-1 Some Effects of Flight Path Upon the Distribution of SonicBooms by Donald L. Lansing 6/81 Prepared for NASA; Langley Research Center, VA

CC-2 SONIC BOOM by Wallace D. Hayes 1971 Prepared for Dept. of Aerospace and Mechanical Sciences Princeton University, Princeton, New Jersey

CC-3 Public Health and Welfare Criteria for Noise 7/73 Prepared by US EPA;Office of Noise Abatement and Control

CC-4 Aircraft Noise Reduction Technology 3/73 by Lewis Research Ctr., NASA, Cleveland, Ohio 44135 Prepared for NASA;WashDC 20546

CC-5 Sonic Booms From Aircraft In Maneuvers 1962 by Domenic J. Maglieri and Donald L. Lansing Langley Research Ctr;Langley Station;Hampton,VA (NASA)

CC-6 Seismic Waves Generated by Sonic Booms: A Geoacoustical Problem by A.F.Espinosa & W.V.Mickey of Environmental Science Services Administration, Rockville,MD 20852 & P.J.Sierra,Observatorio Astronomico Nacional,Universidad de La Plata,Argentina 1967

CC-7 An Investigation of Ground Shock Effects Due to Rayleigh Waves 1966 Generated by SonicBooms by Melvin L. Baron, Hans H. Bleich and Joseph P. Wright(Prepared under NAS contract by Paul Weidlinger,Consulting Engineer,NY,NY for Langley Research of NASA)

CC-8 SST and Sonic Boom Handbook (paperback) by William A. Shurcliff Director, Citizens League Against the Sonic Boom 1970 Published by Ballantine Books,NY

CC-9 The SST:From Watts to Harlem in Two Hours 11/68 by William F. Baxter (from Stanford Law Review) of Stanford U (author is a Professor of Law at Stanford University)

CC-10 Luke AF Range EIS (approximately 10/81) by AF

CC-11 Issues and Concerns Which Need to be Addressed in Environmental Impact Statements - 1982-1983 - Department of Navy Proposals, Fallon Naval Air Station, Nevada by Federal Regulation Review Committee, Legislative Bldg; CapitolComplex; Carson City, Nevada

CC-12 Valentine EIS by AF

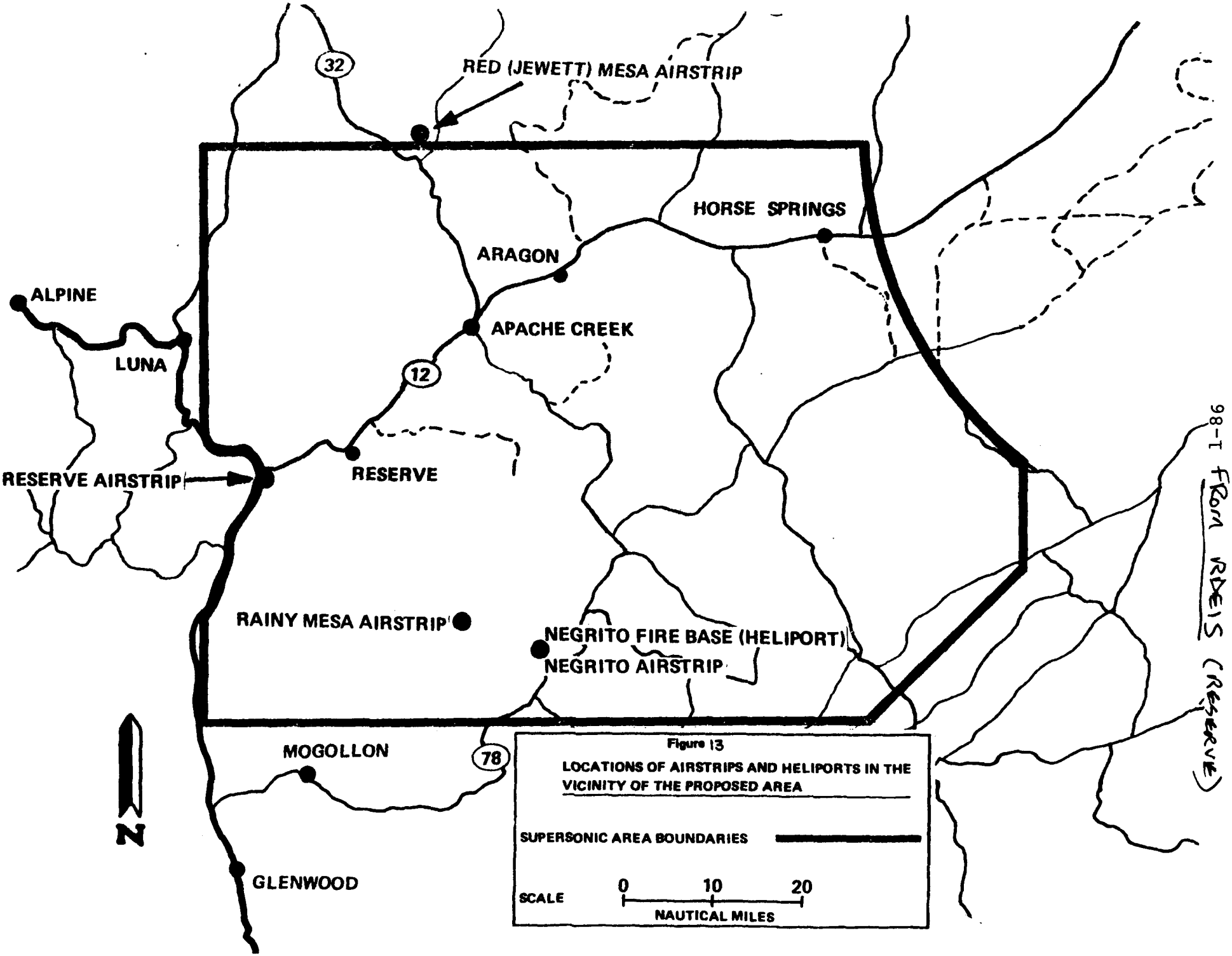


Figure 13

LOCATIONS OF AIRSTRIPS AND HELIPORTS IN THE VICINITY OF THE PROPOSED AREA

98-1 from RDEIS (Reserve)

FROM RESERVE DEIS

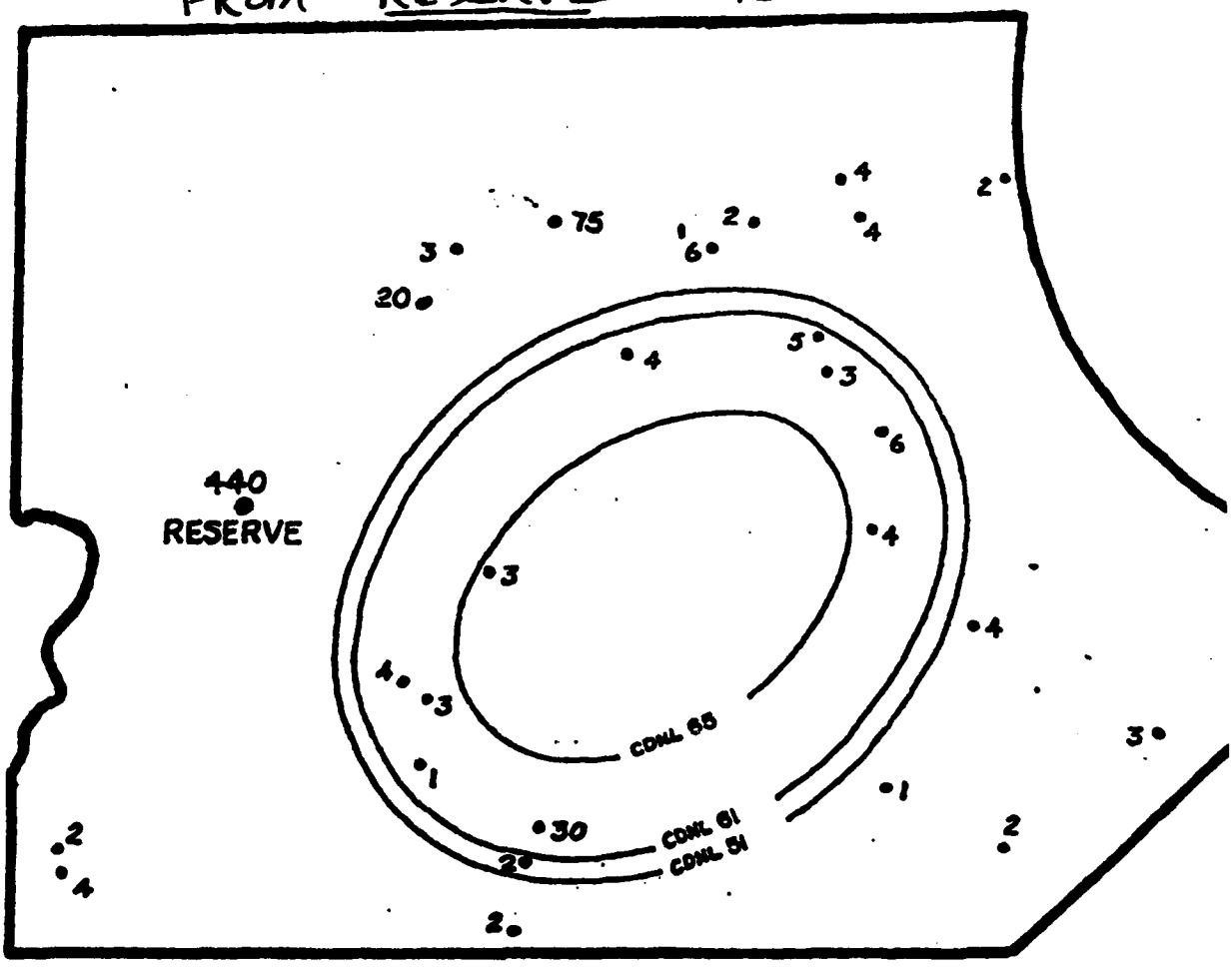


FIGURE 16
NUMBER OF PEOPLE IN THE RESERVE MOA - ALTERNATIVE

↖ 600 persons/mo
↓

Table 10

Number of People in Ellipses at the Reserve MOA

	CDNL 65 Ellipse	CDNL 61 Ellipse	CDNL 51 Ellipse
Total People in Area	3*	60**	2
% Highly Annoyed	22.7	13.7	3.3
Number of Highly Annoyed	0.7	8.2	0.1

↓ 300, often only 6 annoyed

* Present during fire season.
** Thirty-four of the sixty are present only during the fire seaso

FROM VALENTINE DEIS

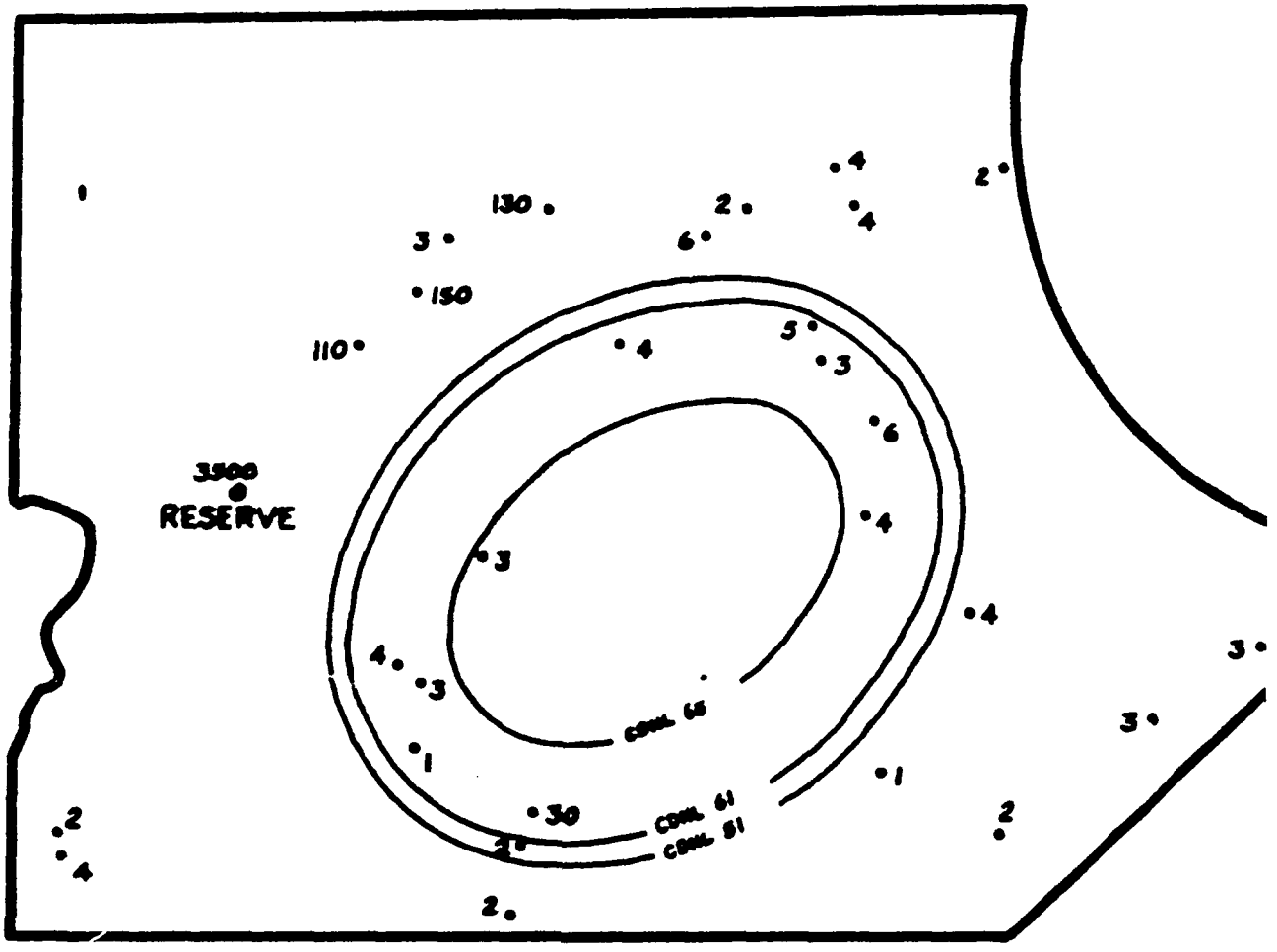


Figure 16 Number of People in the Reserve MOA

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* Present during fire season.
** Thirty-four of the sixty are present only during the fire season.

(U) 4.1.3 SELECTION CRITERIA

Tactical Air Command (TAC) has been designated to receive the first three operational F-15 wings (such as the proposed action for Holloman AFB) as well as provide for the operational testing and evaluation (OT&E) program and conduct the Combat Crew Training (CCT) program. Criteria, in order of priority, for selection of a beddown location is as follows:

(1) Well suited within the Continental United States (CONUS) for overseas deployments. Ancillary consideration is given to the possible integration into the CONUS air defense role.

(2) Air Combat Maneuvering (ACM) airspace with unconstrained use and no altitude limitations - preferably over water or other areas of limited use by civil/general aviation. Instrumented ACM* range is desirable, but not

(3) Good Year-round flying weather - no extended periods of weather below 2,000 ft cloud ceiling and three miles visibility and 200 ft cloud ceiling and one-half mile visibility.

(4) Air-to-air and air-to-ground ranges in close proximity.

(5) Acceptable environment.

(6) Minimum facilities deficiencies/reasonable cost.

TAC installations and facilities throughout the Continental United States (CONUS) are generally located in those areas which are optimum for operational and training requirements, and possess the general facility and security assets normally associated with tactical aircraft operations. In determining the basing of the F-15 weapon system, a significant and possibly the overriding factor is required maneuvering airspace. From the initial conception of the F-15, the flight envelope design has afforded a new and unique capability in Air Combat Maneuvering (ACM). It is desirable to exploit and to enhance the capabilities of the airplane in both initial and continuation training for the F-15 aircrews.

It is anticipated that the F-15 may be called upon to perform the air defense role; therefore, proper geographic positioning to allow integration into the air defense role and still retain responsiveness to worldwide deployment contingencies becomes important in acquiring ACM airspace for F-15 flight operations.

*An instrumented range allows radar coverage of the air-to-air activity in the ACM area to be videotaped and replayed to the air crews upon landing. This technique allows the aircrews to recreate and critique actions which they took during the very fluid and dynamic period of aerial combat maneuvering.

which requires refueling support on a daily basis appears to be impractical due to excessive cost, nonavailability of adequate airspace time and tanker support. Inflight refueling was also considered as a means of utilizing the Nellis Range supersonic airspace located 500 miles west of Holloman. Compared to the Sells MOA, the Nellis Range airspace is located a greater distance from Holloman and has less range time available. Because of the costs, the Nellis airspace is not a feasible alternative.

4.2.1.3 Temporarily Deploy Holloman Units to Satellite Operating Locations to Obtain Supersonic Sorties: The following paragraphs analyze the feasibility of obtaining supersonic sorties by temporarily stationing Holloman units at operating locations with access to supersonic airspace. Before this discussion, however, it is important to review factors for not relocating either the 49th TFW or the 479 TTW.

In the environmental evaluation for the beddown of aircraft at Holloman AFB, over 84 alternate bases were evaluated for the F-15 beddown and 89 bases for the T-38 operations. Holloman is considered to be the optimum location for the F-15 and T-38 aircraft beddown based on the following criteria:

(1) The location is well suited for overseas deployments from the Continental United States. Additionally, F-15s positioned at Holloman enhance air defense capabilities in the south central portion of the United States.

(2) Airspace in the vicinity of Holloman is capable of supporting supersonic flight activity over sparsely populated areas.

(3) Holloman is characterized by good year-round flying weather with no extended periods of weather below 2000 feet (cloud ceilings) and three miles visibility.

(4) Live ordnance air-to-air (F-15) and air-to-ground (T-38) gunnery ranges are located near Holloman so that transit time enroute to and from the ranges is minimized.

(5) Existing base support facilities required only limited new construction to accommodate F-15 and T-38 operational requirements.

(6) The placement of both wings at Holloman resulted in a net increase of 70 personnel as opposed to the 770 decrease in base personnel that would have occurred if the T-38 wing had been located elsewhere. The desirable operational attributes of the Holloman location and the high costs normally involved in moving to and setting up operations at another base make relocation of either the 479th TTW or the 49th TFW very costly, and operationally impractical.

Area residents have suggested that the 49th TFW be relocated to a Texas Gulf Coast military base to conduct supersonic flights over water. Proposed locations near over water supersonic areas were evaluated and eliminated from consideration based on one or more of the following reasons:

Ref: Beddown P&47
* Not approved for Holloman

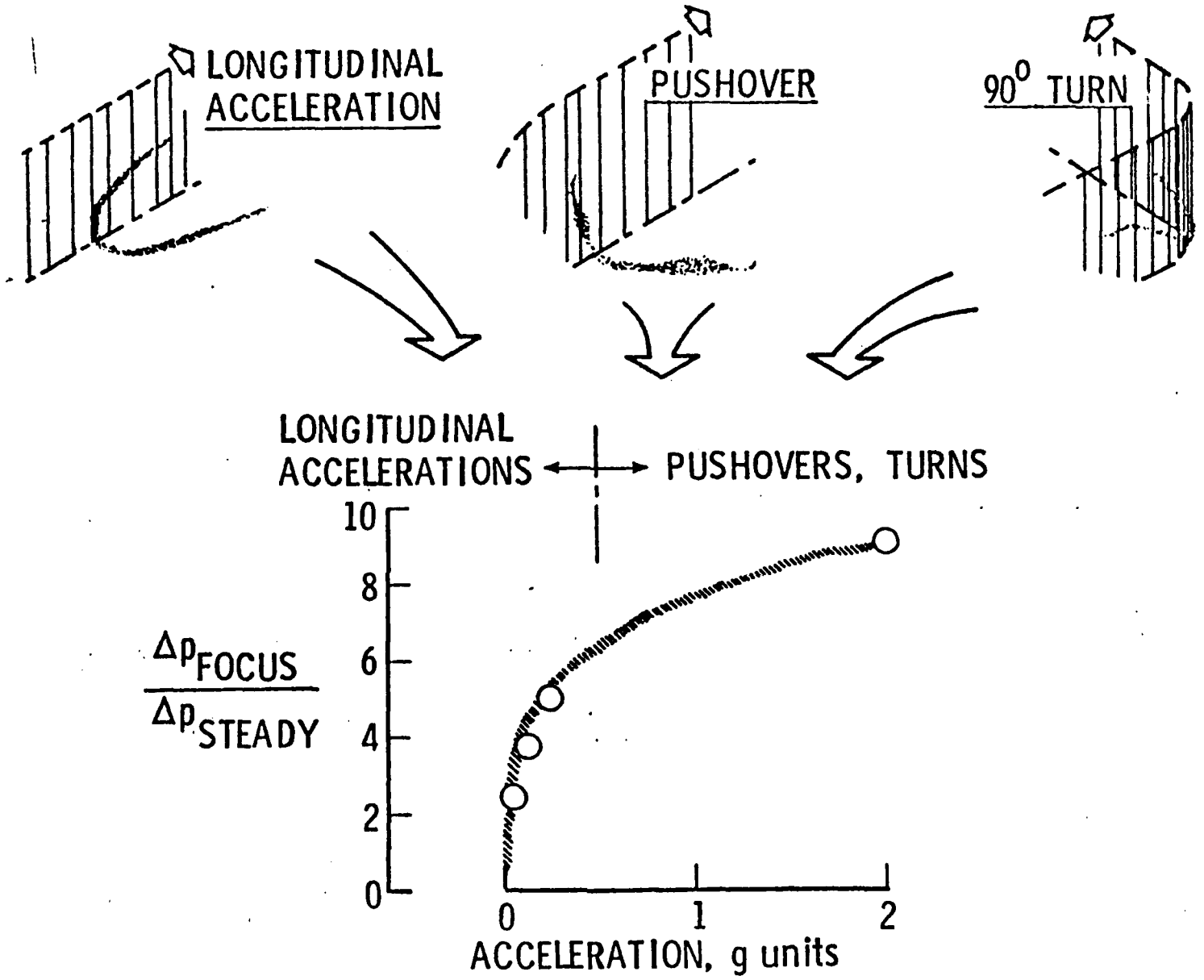


Figure 8.- Flight maneuvers and associated focus booms.

Ref # 98 in RDEIS (NASA TM #80113 6/1979)

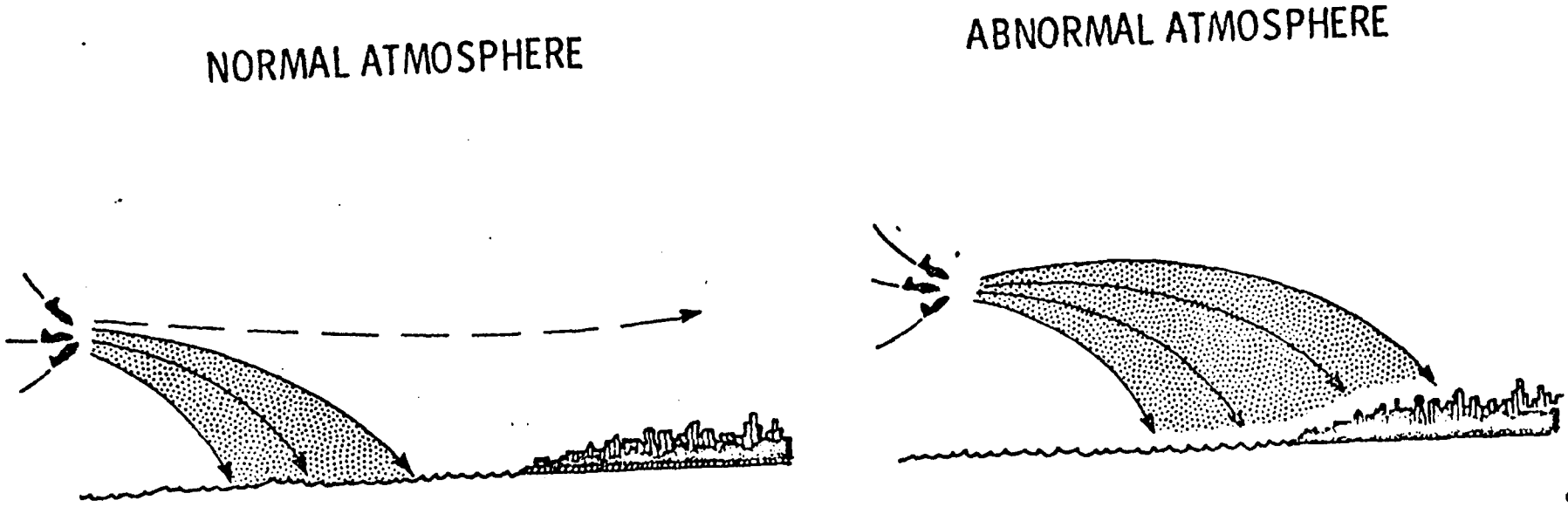


Figure 9.- Atmospheric refraction of maneuver booms.

Ref #98 in RDEIS (Also NASA TM#80413 6/79)

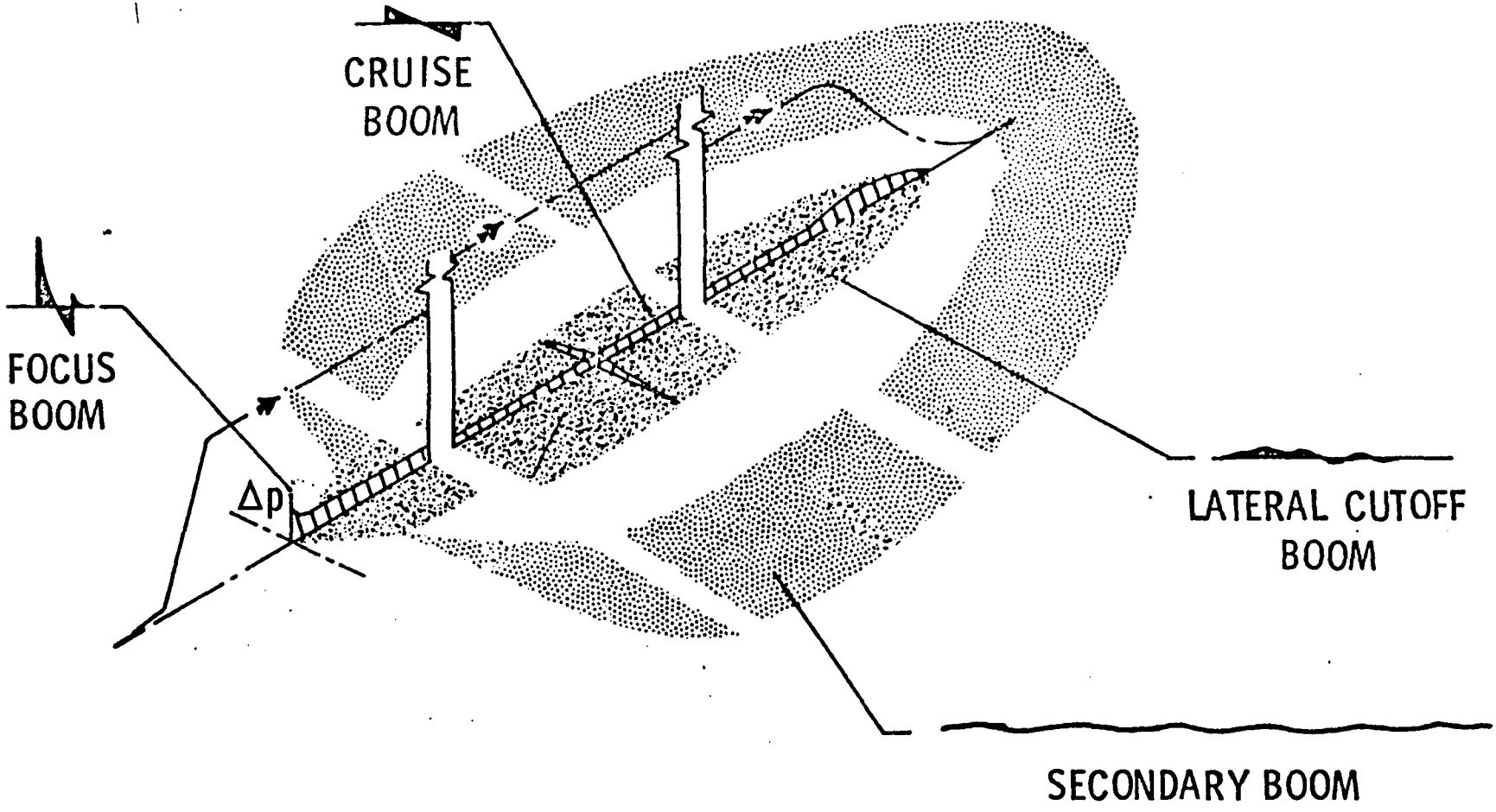


Figure 7.- Schematic of ground exposure carpets and sonic boom waveform characteristics.

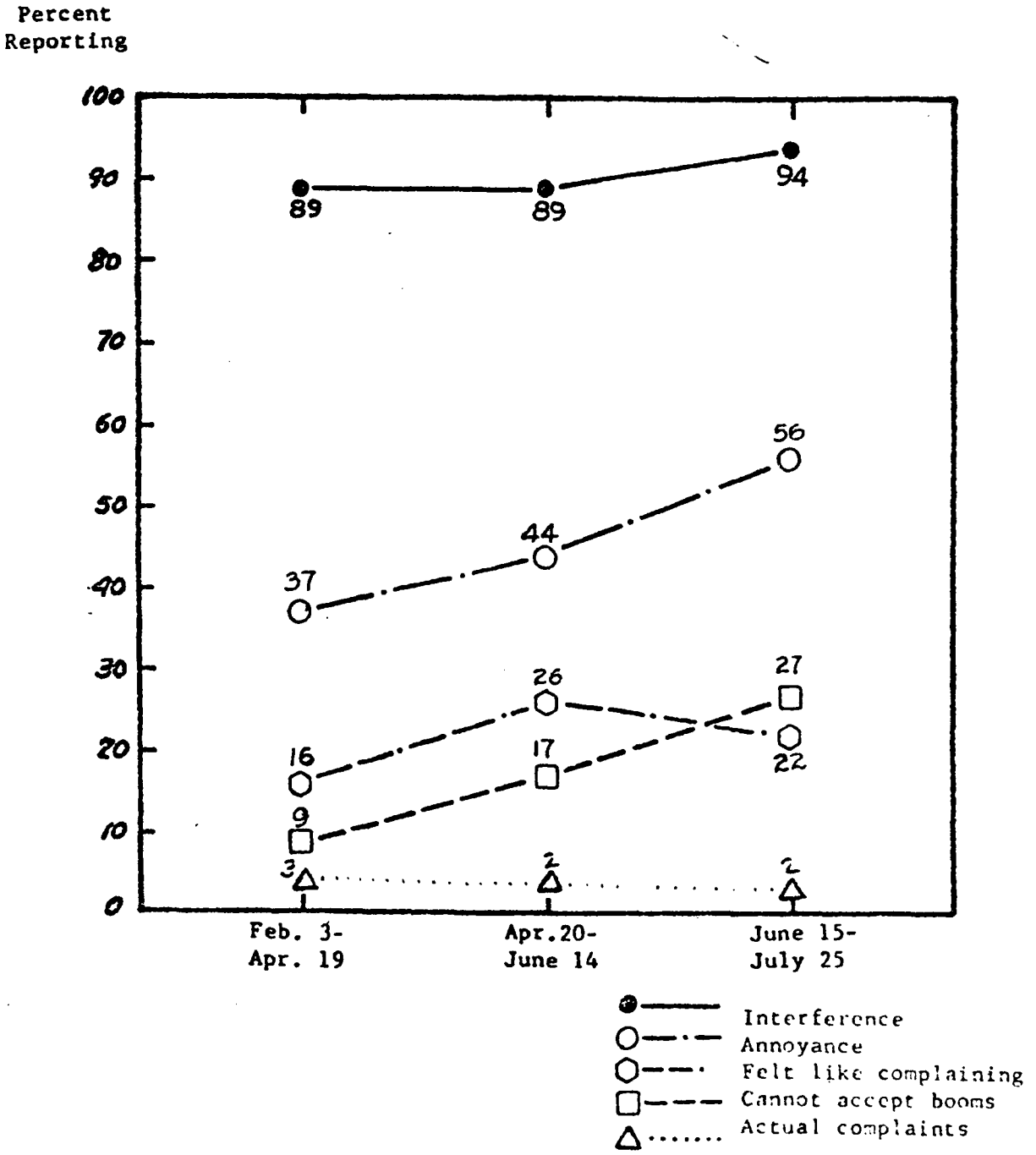
FROM NASA TM # 80113 June 1979 (Ref #98 in RDEIS)
3G-1

REF #10

Table 1

OVERALL REACTIONS TO SONIC BOOMS

Oklahoma City Area
February-July 1964



REF #10

Table 6

REPORTED INTERFERENCE AND ANNOYANCE BY SONIC BOOMS

Oklahoma City Area

February-July 1964

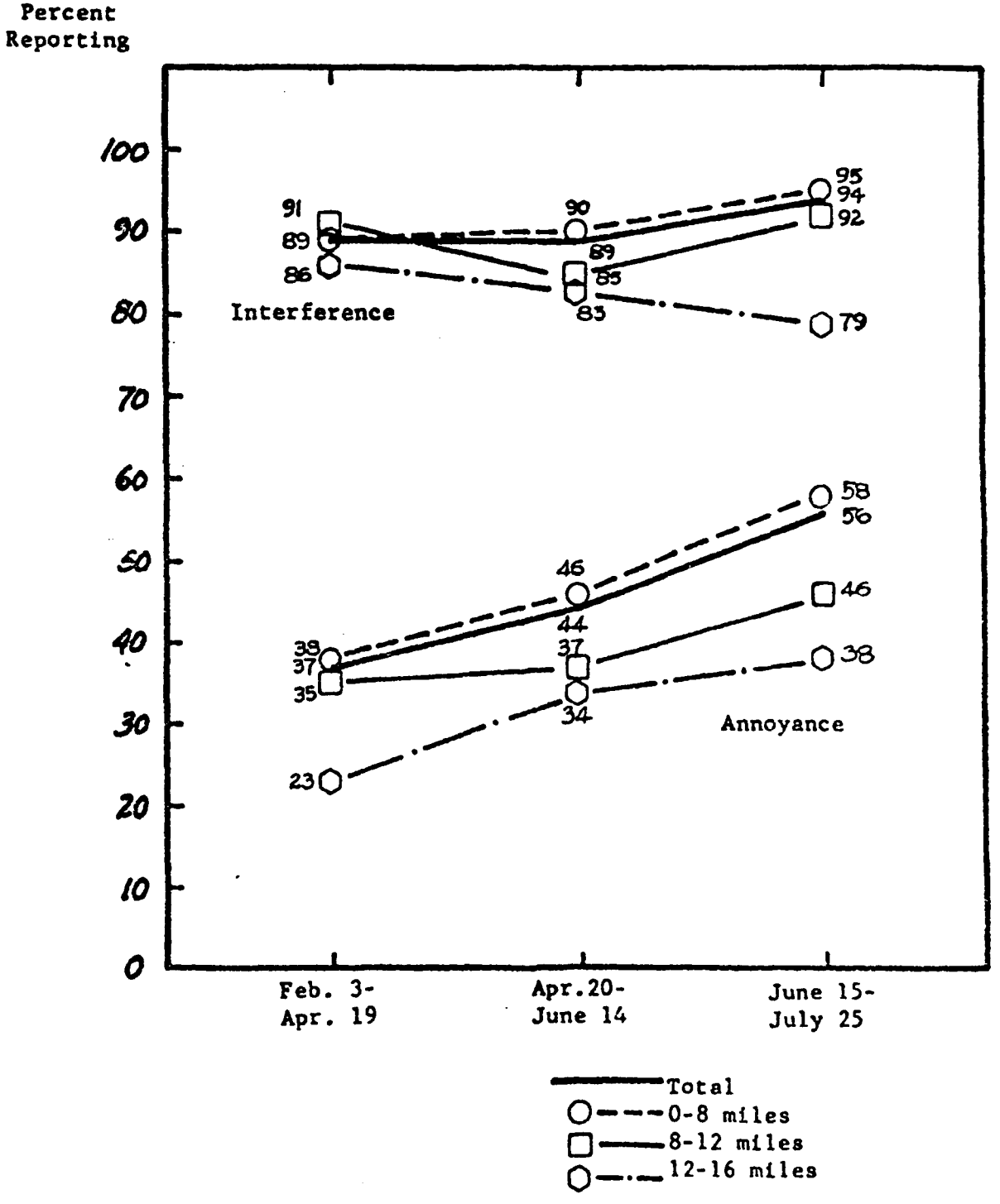


TABLE XII

REF 34

TEST HOUSE NO. 4
SUMMARY OF INSPECTION FINDINGS
INTERIOR DEFECTS

	Week No.	Loose or "Popped" Nails in Gypsum Board: Ceilings	Walls	Total	New Cracks	Extensions of Old Cracks	Misc. Interior Defects	Total Interior Defects
BOOM PERIOD	1			0	7	3		10
	2			0	15		1	16
	3	2		2	6	5		13
	4	1		1	6	1		8
	5	1		1	4			5
	6	3	3	6	2	2		10
	7		1	1	2	3		6
	8	1		1	2	2		5
	9	8	3	11	13	2		26
	10	2		2	1	3		6
	11	19	41	60	7	4		71
	12	3	3	6	4		1	11
	13		1	1	7			8
	14	7	40	47	2	2	1	52
	15	2	21	23	6	2		31
	16		18	18	2	1		21
	17	4	4	8	2	2		12
	18	2	13	15	1			16
	19	4		4		1		5
	20	2	15	17	2	1		20
	21	10	11	21	2	1		24
	22	9	7	16	6	2		24
	23	10	35	45	4		1	50
	24	3	4	7	3	3		13
	25	4	6	10	2	3		15
	26	6	17	23	7	1		31
	TOTALS	103	243	346	115	44	4	509
AFTER BOOM PERIOD	27	4	1	5			1	6
	28	1	15	16	1			17
	29		1	1	3	2		6
	30	4	4	8	1	1	2	12
	31		5	5	1	1	1	8
	32		13	13	5			18
	33		6	6	1			7
	34		1	1		1		2
	35		3	3		3	2	8
	36	1	13	14		2		16
	37		11	11	1			12
	38	3	8	11				11
	39	1	9	10	1			11
	TOTALS	14	90	104	14	10	6	134

Ref 96

TABLE G-1 POPULATION, 1960 - 1978
MARICOPA COUNTY AND TOWN OF WICKENBURG, ARIZONA

	STATE OF ARIZONA		MARICOPA COUNTY		
Year	Population	Percentage Avg. Annual Growth Rate	Population	Percent of State	Percentage Avg. Annual Growth Rate
1978	2,354,000		1,293,200	54.9	
		2.1			2.6
1977	2,305,000		1,260,400	54.7	
		2.5			3.0
1976	2,249,130		1,224,094	54.4	
		1.1			0.2
1975	2,225,077		1,221,414	54.9	
		3.4			3.6
1973	2,083,161		1,140,257	54.7	
		5.9			6.0
1970	1,770,900		967,522	54.6	
		1.7			3.7
1966	1,609,000		842,522	52.3	
		3.9			4.5
1960	1,302,161		663,510	50.9	

N/A: Data Not Available

SOURCE: U.S. Department of Commerce, Bureau of the Census.
See Bibliographic References AZ-35 through AZ-38.

Maricopa, Mohave, and Yavapai Counties were used to analyze the economy of the Gladden MOA.

CC ref # 26 DEIS GANDY RANGE

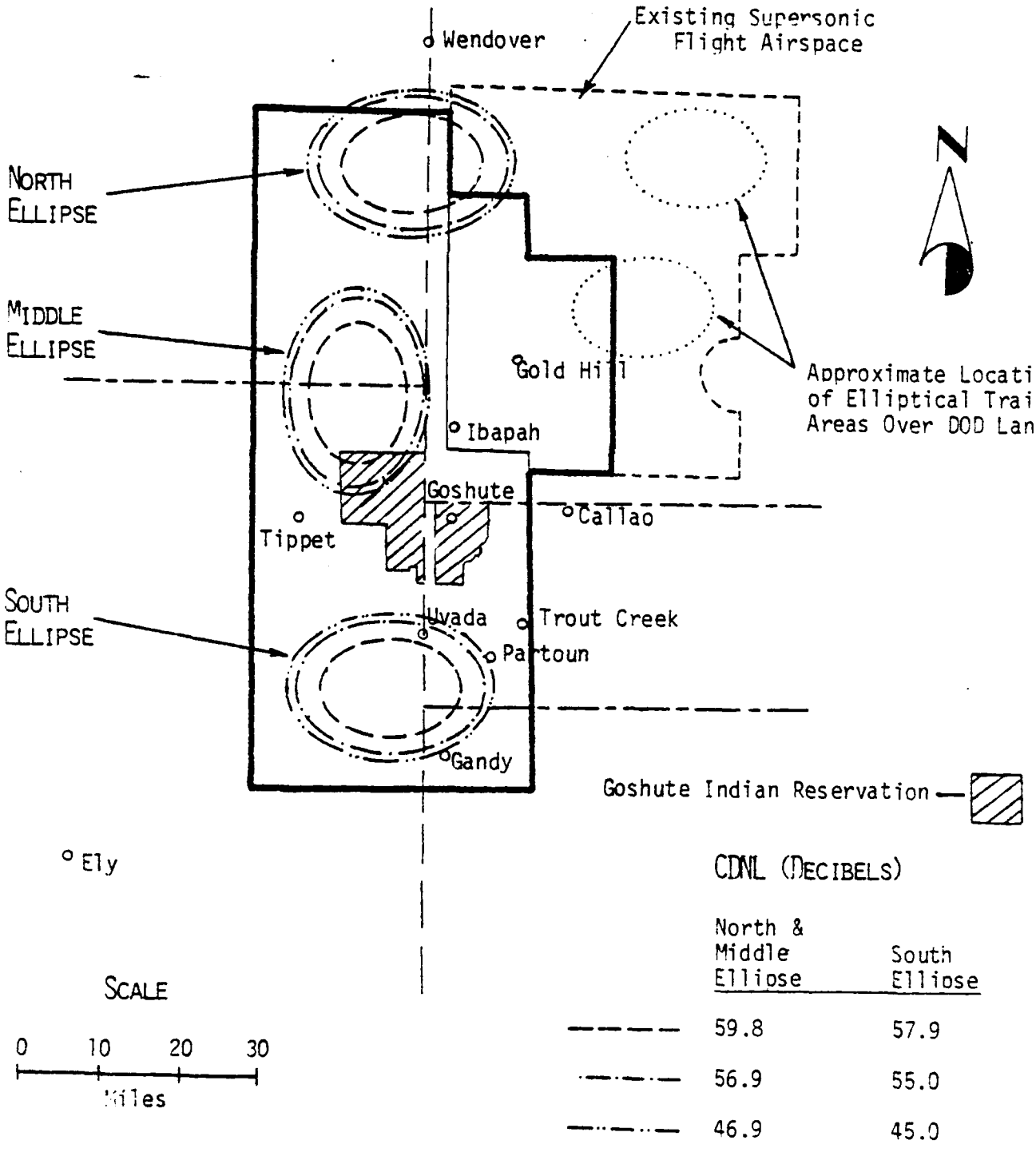


FIGURE 8.0

C-WEIGHTED DAY-NIGHT AVERAGE SOUND LEVELS (CDNL) OF SUPERSONIC FLIGHT ELLIPSES

Ref 94 (GALLOWAY)

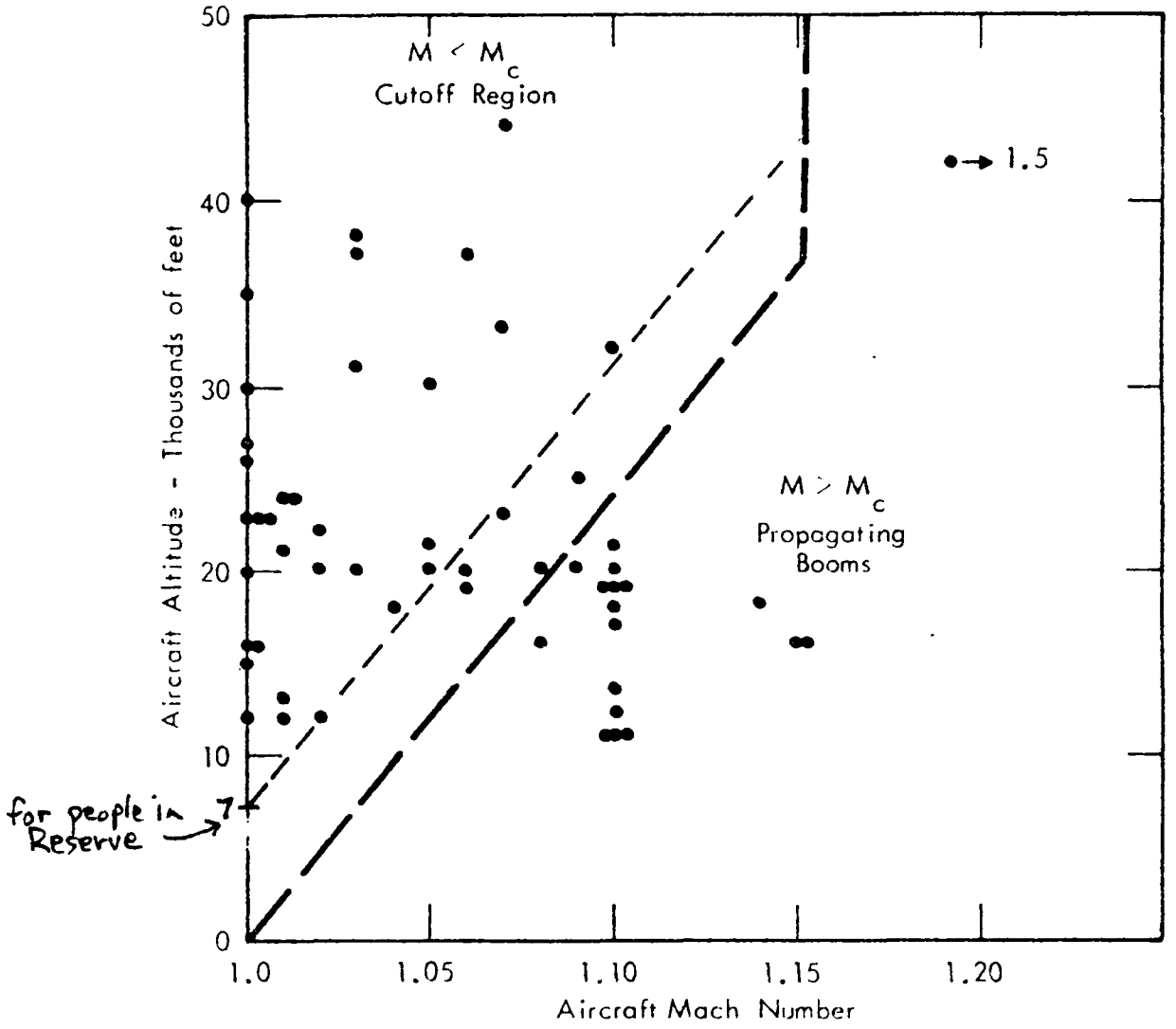
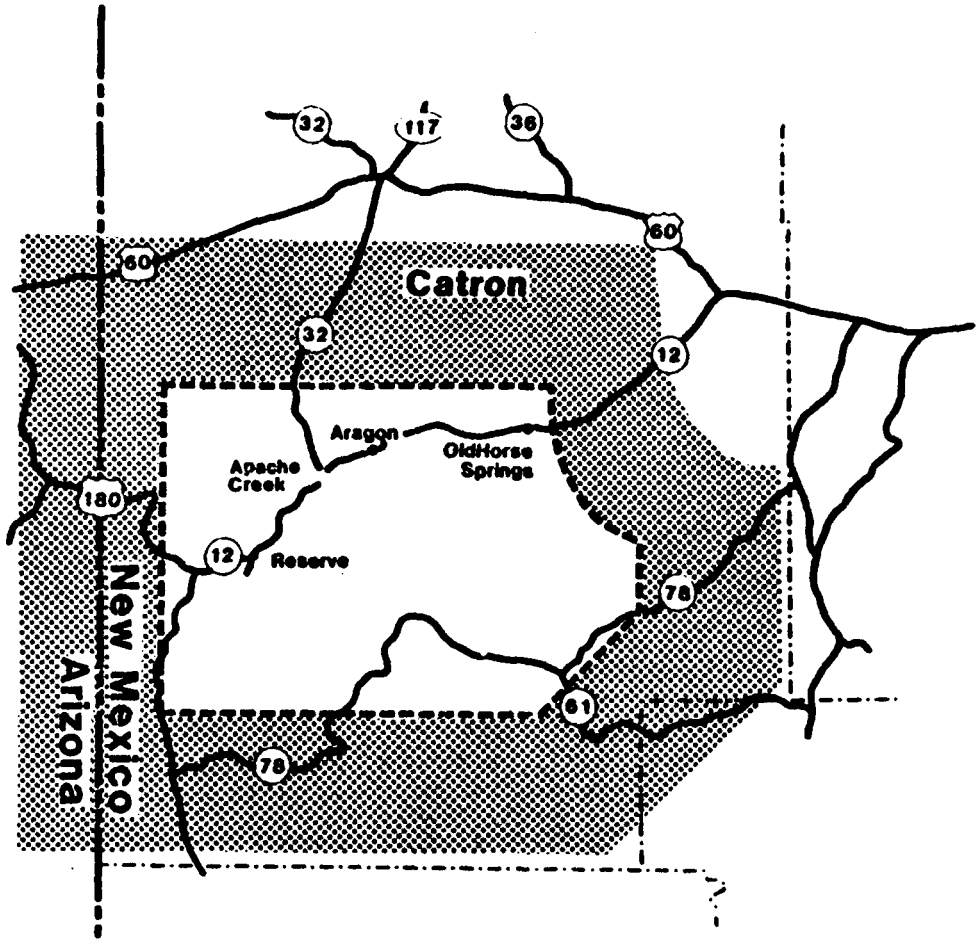


FIGURE 4. F-15 MACH NUMBER/ALTITUDE DISTRIBUTION FOR 21 SORTIES IN OCEANA MOA



MAP M-2

Economic Impact Study
Valentine/Morenci MOAs
U.S. Air Force Tactical Air Command

Existing
MORENCI SUPERSONIC
MILITARY OPERATIONS AREA
New Mexico

---- Supersonic MOA Boundary
:::::: 15 Mile Perimeter

TeamFour
April 1980

REF #96 ECONOMIC IMPACT STUDY

INDEPENDENT SCHOOL DISTRICT NO. 1

CATRON COUNTY
OFFICE OF THE SUPERINTENDENT
P. O. BOX 347
RESERVE, NEW MEXICO
87830

October 18, 1983

HQ TAC/DEEV
Attention: Alton Chavis
Langley AFB, VA 23665

Dear Sir:

135 The School Board of Education of Catron County, Independent District #1, in Reserve, New Mexico, strongly opposes the planned supersonic flights in the Reserve MOA. The Board feels that the Air Force has not seriously considered the alternatives to the proposal. The potential health effects are certainly clear enough to warrant further detailed research before the flights begin. The effects on the tranquility of the county are obvious. The impact on the school according to the DEIS would be substantial. The interference with the class room atmosphere would be detrimental to the students. 135

136 The Board believes that the Air Force, through more efficient use of existing supersonic airspace, could accomplish the necessary training needed to maintain combat readiness. 136

Sincerely,

Sam Trujillo

Sam Trujillo,
President, Board of Education

ST:ss

John J. Kelly
LAW OFFICES

201 BROADWAY SOUTHEAST · ALBUQUERQUE, NEW MEXICO 87102 · 505-842-6123

September 2, 1983

HQ-TAC/DEEV
Attn: Mr. Alton Chavis
Langley AFB, Virginia 23665

Dear Mr. Chavis:

I am writing on behalf of the Catron County Commission with respect to the comment period and public hearing on the proposal of the U.S. Air Force to conduct supersonic operations over the County. Within the next few days you will receive a request from the County Commission and New Mexico State Officials asking that the Air Force extend the comment period on the EIS an additional thirty (30) days to October 30, 1983 and further that a public hearing be held on October 13, 1983.

My purpose in writing is to give you as much advance notice as possible of the request. The mail from Reserve, New Mexico to Washington, D.C. can take a week or longer.

The County and the State believe an extension is necessary to ensure adequate public participation in the EIS review process. Your cooperation in this regard will be appreciated.

Yours truly,

John J. Kelly
Attorney for Board of
Commissioners, Catron County

JJK/lal

STATE OF NEW MEXICO

CATRON COUNTY

RESERVE, NEW MEXICO 87830

ROBERT A. ATWOOD
CLERK — 533-6400

PATTY K. CHADDICK
TREASURER — 533-6384

BONNIE MILLIGAN
ASSESSOR — 533-6577

DON BARTRAM
PROBATE JUDGE

CORWIN HULSEY
SHERIFF — 533-6222

ELLIOTT G. McMASTER
COMMISSIONER DISTRICT NO. 1

W. ALVIN LANEY
COMMISSIONER DISTRICT NO. 2

DAVID M. VACKAR, CHAIRMAN
COMMISSIONER DISTRICT NO. 3

COMMISSION OFFICE — 533-6423

September 1, 1983

HQ-TAC/DEEV
Attn: Mr. Alton Chavis
Langley AFB, Virginia 23665

Dear Mr. Chavis:

137 Enclosed is a Petition for Extension of Time of the comment period concerning the Air Force's draft environmental impact statement concerning supersonic flights over Catron County. The petition also requests that a public hearing be held October 13, 1983 at 7:00 P.M.. 137

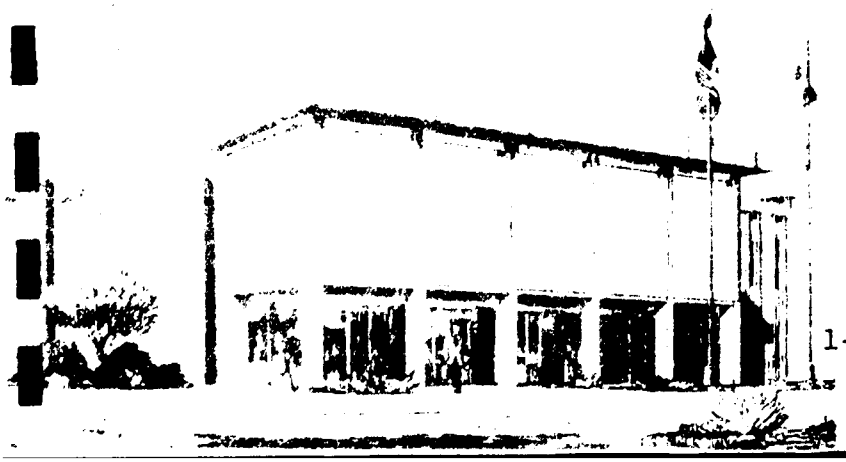
We request your prompt consideration of this request and look forward to hearing from you in the very near future. Please be assured of our cooperation in making arrangements for the public hearing.

Yours truly,

David M. Vackar
Chairman

DMV/lal

Enclosures



1-103

IN THE MATTER OF)
THE REVIEW OF REVISED)
DRAFT ENVIRONMENTAL IMPACT)
STATEMENT, SUPERSONIC FLIGHT)
OPERATION IN THE RESERVE)
MILITARY OPERATIONS AREA)
HOLLOMAN AIR FORCE BASE,)
NEW MEXICO)
)

PETITION FOR EXTENSION OF TIME

The undersigned Governor of the State of New Mexico, Commissioner of Public Lands of the State of New Mexico, member of the New Mexico State Senate, and the Board of County Commissioners of Catron County, New Mexico hereby petition the United States Air Force, Department of Defense to extend by thirty (30) days, to October 30, 1983, the period of time for the submission of written comments on the above captioned environmental impact statement (EIS) and to schedule an informal public hearing on the draft EIS in Reserve, New Mexico on October 13, 1983 at 7:00 P.M..

The request to extend the comment period is made pursuant to 40 CFR § 1506.10 (c)(d). As grounds for this request the undersigned state as follows:

(1) New Mexico state agencies with an interest in the proposed project and with technical expertise in areas of probable environmental impact have not all received copies of the draft EIS.

(2) The draft EIS raises a number of complicated issues, particularily the noise analysis and the impacts of supersonic noise on people and wildlife. Without an extension of the comment period, state and local government agencies will have insufficient time to undertake the necessary technical review and analysis that must precede the submission of written comments.

(3) The four year time lapse between the release of the initial draft EIS and the revised draft EIS, suggests that a further delay of thirty (30) days to afford state and local officials an opportunity to review and comment, will not adversely affect Department of Defense interests.

The undersigned also request that a public hearing on the proposed action be scheduled on, or subsequent to, October 13, 1983 in Reserve, New Mexico. The reasons for this request are as follows:

(1) There is a high degree of concern in Catron County, New Mexico about the proposed action and its environmental impacts. In 1979 a similar hearing was held on the initial draft EIS with more than 500 county residents in attendance.

(2) Catron County is a rural area with fragmented newspaper, television and radio coverage. Many residents rely on word of mouth to learn of local events. As a result it is a time consuming process to adequately publicize a public meeting.

(3) A public hearing scheduled during mid September would not be adequately attended, because many county residents travel to Albuquerque during that period of the State Fair.

For the foregoing reasons the undersigned petition the United States Air Force Department of Defense to extend by thirty (30) days the period for submitting written comments and to schedule a public hearing in Reserve, New Mexico on October 13, 1983.

Toney Anaya
Governor of New Mexico

Jim Baca
Commissioner of Public Lands

Ben Altamirano
State Senator, District 28

Board of County Commissioners,
Catron County, New Mexico

David Vackar
Chairman

Elliott McMaster
Member

Alvin Laney
Member

STATE OF NEW MEXICO

CATRON COUNTY

RESERVE, NEW MEXICO 87830

ROBERT A. ATWOOD
CLERK — 533-6400

PATTY K. CHADDICK
TREASURER — 533-6384

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COMMISSIONER DISTRICT NO. 1

W. ALVIN LANEY
COMMISSIONER DISTRICT NO. 2

DAVID M. VACKAR, CHAIRMAN
COMMISSIONER DISTRICT NO. 3

COMMISSION OFFICE — 533-6423

November 1, 1983

Senator Jeff Bingaman
302 Hart Senate Office Bldg.
Washington, DC 20510

Dear Senator Bingaman:

I am a native of Catron County who attended the Air Force hearing on the sonic boom issue in Catron County.

I came away from that meeting with feelings of frustration and outrage. I am not in the military service and do not feel I should be treated so. The gentleman who conducted the meeting was so dictatorial as to the type of question that could be asked that I do not feel a true or complete picture was presented by the Air Force.

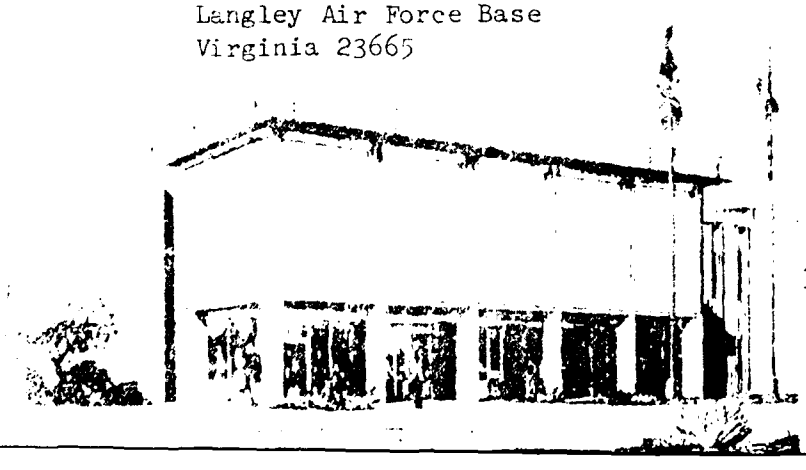
138 I am not unpatriotic, I just feel there are other more feasible places for the Air Force to fly - more economical for the taxpayers of this Country too. I do not feel any reasonable person can approve of the Air Force proposal at this point in time with the limited information made available by the Air Force. 138

Sincerely,

Patty K. Chaddick

Patty K. Chaddick
Catron County Treasurer

cc: Alton Chavis
HQ TAC/DEEV
Langley Air Force Base
Virginia 23665



1-107

Hdqts. TAC

DEEV

Langley Air Force Base, Virginia

Dear Sirs:

The Catron County Farm Bureau wishes to express its opposition to the proposed sonic booms in Catron County. We feel as though the EIS submitted by the Air Force is inadequet and misleading. We also feel as though the Air Force has existing facilities to train their supersonic aircraft without annexing air space over inhabited lands. 139

139

We represent over one hundred citizens in Catron County so we think that our input should be considered.

Sincerely,

Jim Williams

Jim Williams
President
Catron County Farm Bureau
P.O. Box 182
Quemado, N.M. 87829

New Mexico

WILDERNESS STUDY COMMITTEE



9601 Haines Avenue NE
Albuquerque, New Mexico 87112
October 27, 1983

Mr.Alton Chavis
Tactical Air Command/DEEV
Langley AFB , Va. 23665

Dear Mr. Chavis:

I have heard of the Air Force plans to expose the Gila Wilderness to Super Sonic Booms. No human beings or wildlife or Wilderness Areas should be committed to such intense exposures. The purpose of Wilderness is to provide a haven to escape such devistating exposures. 140

The Air Force should locate their bases for Super Sonic Jets where they can soon be out over water after take-off. Such planned training flights should be done over large bodies of water and not over people. You have lost your sensitivity! 141

Respectfully,

Milo M. Conrad

Milo M. Conrad
Past Director and Founder
NMWSC

copies to:
Gov. Toney Anaya-New Mexico
Sen. Pete Domenici
Sen. Jeff Bingaman
Congressman John Siberling

New Mexico

WILDERNESS STUDY COMMITTEE



913 Adams SE
Albuquerque, NM 87108

October 28, 1983

Mr. Alton Chavis
Tactical Air Command/DEEV
Langley AFB, VA 23665

Dear Mr. Chavis:

The New Mexico Wilderness Study Committee wishes to express its opposition to the proposed super-sonic training flights over Catron County in New Mexico.

142 Not only will the resulting sonic-booms disrupt the tranquility of the Gila Wilderness and adversely effect the wildlife, but, worse yet, it will have an intolerable impact on the people living in the Reserve area. We believe it is totally wrong to subject anyone to such health damaging conditions. The flights can and must be conducted elsewhere, over areas that are unpopulated. 142

Sincerely,

Jack Kutz

Jack Kutz, Chairperson

Copies to: Gov. Toney Anaya
Sen. Pete Domenici
Sen. Jeff Bingaman
Mr. Larry Tackman

Jim Stewart
1004 Palisades NW
Albuquerque, NM
87107
November 2, 1987

Headquarters, Tactical Air Command/DEEV
Langley AFB, VA 13665

I am commenting on behalf of the Rio Grande Chapter of the Sierra Club which is on record as opposing the proposal for supersonic training flights over the Mescalero MOA.

The proposal to conduct supersonic flights over any populated areas is an amazing example of chutzpah. The DEIS and RDEIS are strawmen which do not address the real issue. In a sense the issue is one of eminent domain. To what extent can an agency of the goverment impose upon some small segments of our citizenry what is presumed to be the will of the majority and what reparations are to be made for this imposition upon the precious right of freedom to live as one choses?

In virtually every city and village in the country there exist ordinances prohibiting noise - prohibiting kids with loud cars from disrupting the general calm, prohibiting loud parties, prohibiting business operations which exceed some reasonable noise level. The manifest reason for these rules is not because there exist long term physical effects or because of demonstrable psychological upset. These laws exist by almost unanimous assent because people wish to lead lives surrounded by relative peace and calm. It is difficult to imagine anyone giving credence to the argument of a hot-rodding youth who has done his homework and found that no solid scientific evidence proves his loud car does any permanent physical or psychological damage and so, he should be allowed to cruise down our streets as loudly as he desires.

But, in the name of national security, the Air Force and the Navy are asking just that. Its ok though, because they won't do their cruising in the city where lots of folks will be disturbed. They want to do it over the rural areas of Texas, New Mexico and Nevada where people have chosen to live in a much quieter environment than our cities, where the difference between the background noise and a sonic boom will be even greater.

It is discouraging that supersonic training over populated areas is even considered an alternative much less the preferred alternative. It is clear that the issue is national in scope. The military is, once again, redefining our concepts of eminent domain, doing it piecemeal on a local basis, avoiding a national debate. The proposals by the Air Force in Texas and New Mexico and by the Navy in Nevada should be dropped until a programmatic EIS can be written which will address the new national policy of subjecting citizens to sonic booms on a regular basis. (Its new, of course, only to taxpaying, voting Anglos never mind the Papago Indians in Arizona).

The taxpayers of this country have recently seen some examples of how careful the Pentagon is with our money. How much money could be recovered from the fraudulent

143

143

[illegible] what is outrageously steal from the taxpayer to [illegible] "[illegible] the reasonable needs of [illegible] supplied to the military" (see attached newspaper article). How much money could be trimmed from the billions of dollars in cost overruns in military contracts? How much effort would it take to save the paltry $30 million the Air Force says it would take to train at Tyndall AFB in Florida? Surely, to ask these few Americans to give up the peace and tranquility of their lifestyles so that $30 million can be saved is to relegate the Boeing or Sperry, or TRW to apply to a cost overrun, to a ludicrous priority.

These issues are not separable. As convenient as it is to avoid the national scope of what has been proposed it cannot be allowed.

The myopia of the writers of this RDEIS is no where more evident than in their dismissal of weekend flying at 40°N as an alternative. It would certainly be unreasonable to fly seven days a week - the alternative offered. Why not shift everyone's flying schedule by two days and give people Sunday and Tuesday off? Couldn't the 479 TTW cooperate with the 49th TFW to that extent? Of course, it would be moderately inconvenient to AF personnel but it is an inconvenience shared by millions of Americans who work a schedule other than Monday through Friday not to mention those who work Sunday through Saturday just to keep going in these austere times. 44 44-1

In summary: supersonic flights over populated areas should be considered only as a last resort, when all other alternatives are exhausted and only then in time of demonstrable national crisis. Clearly, other alternatives do exist which, inlight of the Pentagon's spending priorities, have not been addressed. The quasi-scientific studies of the effects of sonic booms on people, animals and resources are not particularly relevant until it is shown, unequivocally that no reasonable alternatives exist.

Jim Stewart

Wrenching tale

Pentagon paid $9,609 for a 12-cent tool, probe finds

By LANCE GAY
Scripps-Howard News Service

WASHINGTON — The Pentagon last year was billed $9,609 for a simple hexagonal wrench that Senate investigators bought at a corner hardware store for less than a dollar.

Sen. William Roth, R-Del., says that's only one of a series of overcharges investigators for the Senate Governmental Affairs Committee have found combing through Pentagon contracts.

"We found examples of what could be gross overpricing," said Roth, who has called Deputy Defense Secretary Paul Thayer and Pentagon officials on the carpet Wednesday for a hearing on the problems.

Roth said the wrench is only one example, and cited:

- A $1 washer-like "spacer" for which the Pentagon was charged $9,800 each.
- A specialized cutting tool that cost $7 in the hardware store but was offered to the Pentagon for $900.
- A $5 tool used as a "pilot" that carried a pricetag of $1,100 each.

A Pentagon spokesman said there would be no response to the panel's findings until the hearing.

Roth said the high-priced tools and hardware were found in just one bundle of contracts involving tools needed to fix and maintain the radar for the Air Force's F-16 fighter. Senate investigators estimated there are contracts worth about $100 million for specialized tools used on the aircraft.

The prices were contained in a contract General Dynamics submitted to the Pentagon last Nov. 17. The company also makes the F-16.

A spokesman for General Dynamics did not respond to a reporter's request for a statement on Roth's charges.

Senate investigators said that when they examined the contract bid, they found that General Dynamics was buying most of the tools from Westinghouse Electronic Co., which manufactured them. In the process, they said, General Dynamics had increased some of the prices sharply.

For example, Westinghouse bild General Dynamics it would charge the firm $5,618 for an "antenna clamp alignment tool." But in General Dynamics' submission to the Pentagon, the cost of this item was listed as $10,137.

Westinghouse said it would sell the small "antenna hexagonal wrench" to General Dynamics for $5,295. But in the airplane firm's bid to the Pentagon, its cost had increased to $9,609.

Investigators said they found the tool was just a "simple 7/64 Allen wrench" available in any hardware store.

"We bought 100 for 12 cents each and Roth has been giving one to each member of the Senate," an investigator said. The wrench is used to loosen or tighten a screw on the antenna, he said.

The investigators said the Pentagon did not examine all contracts but chose only a sample to see if the well-publicized problems of skyrocketing spare parts also affected the cost of the tools. "We think the problems still exist," said one. They said Pentagon auditors have stopped the contract from being approved and have conducted an investigation, which recommended an examination of contracts on a number of other projects.

1-113

Please include this in the file record.

NATIONAL RADIO ASTRONOMY OBSERVATORY
1000 BULLOCK BOULEVARD, N.W. POST OFFICE BOX O SOCORRO, NEW MEXICO 87801
TELEPHONE 505 835 2924 TWX 910 988 1710 VLA SITE 505 772 4011

August 4, 1983

Headquarters Tactical Air Command/DEEV
Langley AFB, VA 23665

Subject: Comments on Draft Environmental Impact Statement

Reference: June 29, 1983 Revised Draft, Environmental Impact Statement, Supersonic Flight Operations in the Reserve Military Operations Area, Holloman AFB, New Mexico

Sirs:

Thank you for the copy of the reference document. Provided that the boundry of the operating Area is modified as shown in Figure 10, page 2-3 of the reference document, preventing supersonic flight from occurring nearer than 20 miles to the Very Large Array, this revised draft is acceptable to the National Radio Astronomy Observatory.

Sincerely,

P. J. Napier

Peter J. Napier
Deputy Site Manager/VLA

PJN/tr

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UNDER CONTRACT WITH THE NATIONAL SCIENCE FOUNDATION

NATIONAL RADIO ASTRONOMY OBSERVATORY
POST OFFICE BOX O SOCORRO, NEW MEXICO 87801
TELEPHONE 505 772 4011 TWX 910 988 1710

October 27, 1983

Headquarters, Tactical Air Command/DEEV
Langley Air Force Base
Virginia 23665

Subject: Comments on Draft Environmental Impact Statement
Reference (a): June 29, 1983 Revised Draft, Environmental Impact Statement, Supersonic Flight Operations in the Reserve Military Operations Area, Holloman AFB, New Mexico.
(b): National Radio Astronomy Observatory letter dated August 4, 1983, same subject, by Peter J. Napier.

Sirs:

Subsequent to Reference letter (b), further investigation reveals the potential for occurrence of sonic booms at the Very Large Array (VLA) as shown in Figure 2-3 of subject DEIS, even allowing for the 20 mile buffer previously provided. Our main concern is that the "Jet Stream" or other abnormal atmospheric conditions might cause the Pressure Wave to travel further than usual and cause harm to maintenance personnel while working on the Radio Telescopes at the VLA.

No matter how infrequent, any startle response could be disastrous to VLA personnel on the stairs, ladders or exposed structure of the Radio Telescopes, or while transporting a Radio Telescope on the special purpose vehicles. Personnel danger will also exist under specific conditions when a Radio Telescope boresight is in alignment with the Reserve MOA, previously mentioned atmospheric conditions exist, and personnel are working at or near the prime focus of a telescope. The Radio Telescopes utilized at the VLA are a Cassegrain System with a 25 meter parabaloid of revolution as the prime reflector and a 2.3 meter hyperbolic secondary reflector. These telescopes will effectively focus acoustic as well as electromagnetic energy and our calculations show that pressure waves due to sonic booms could be amplified by a factor of 20 near the prime focal point of the 25m parabolas. Depending on the strength of the boom, this amplified pressure wave could endanger personnel working near the focal point of a telescope when a boom occurs.

Because of this concern for the safety of personnel working on VLA Telescopes, we request that information be included in the Final EIS concerning the frequency of occurrence of unusual atmospheric conditions, or other effects such as boom focusing resulting from aircraft turning, causing sonic booms to reach the VLA site, and the pressure strengths to be expected in such waves when they do arrive at the VLA. This information will allow us to determine if special maintenance procedures are necessary at the VLA to ensure personnel

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45 safety at all times. Should low-level supersonic flight in the Reserve MOA be started, we request that we be notified so that our maintenance personnel working on the telescopes can be cautioned. 145

Should the Air Force wish to discuss these concerns with us, please contact Mr. Les Temple, Head of the VLA Engineering and Services Division at the phone number above.

Thank you for your consideration.

Sincerely,

P. J. Napier

Dr. Peter J. Napier
Deputy Site Manager/VLA

PJN/ap
enclosures: (2) Information concerning the VLA.

P.O.Box 278, Glenwood, NM 88039
October 26, 1983

PROPOSED SUPERSONIC FLIGHTS OVER THE RESERVE MILITARY OPERATIONS AREA

Hon. Jeff Bingaman
U.S.Senate
Washington, DC 20510

Dear Senator Bingaman:

I have appreciated your reaction to my recent letters in which I urged you not to let the Air Force impose a ruinous program of supersonic booms on the Reserve area until you have all the facts.

The public hearing held by the Air Force in Reserve on October 20 revealed some of these facts: numerous deliberate deceptions in their DEIS regarding widespread loss of health and property values that would result from their proposed program.

The Catron County Commissioners are preparing a detailed brief to go to you and to all of our elected officials as well as the Air Force, which will show that the present DEIS cannot possibly meet the requirements of the Federal Law governing such matters.

I believe no fairminded person can read the analyses that have been prepared by various persons in Catron County without concluding that vital facts were deliberately concealed or misrepresented almost throughout this DEIS -- in other words with an intent to deceive. A plea of simple ignorance would not explain away, for example, some of the falsifications and misuse of data for population distribution, and for economic growth in metropolitan areas far removed from supersonic operations.

94-46

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Senator Bingaman, the Air Force lost a tremendous amount of credibility and support on the part of those present at this hearing, as well as those who have carefully studied the DEIS.We have a right to be protected, not ruined, by the defenders of our country.Intentional deception to cover up vital facts should not be permitted in any attempt to comply with Federal law.

New Mexico already has given over seventeen percent of our land to the military. We do not believe that, in addition to this, we should be asked (forced is more correct) to sacrifice our health and property merely for Air Force logistical convenience. There are other more suitable areas.And for that matter, since the major population areas would be defended, not Reserve and Glenwood,and since the Air Force claims no harm and very few even "highly annoyed", why not let them practice over the metropolitan areas where there would be more people who would be grateful for the protection.

We ask for your help, not just to preserve the quality of our lives here, though this ought to be reason enough, but to protect our region from the threat (we do not exaggerate!) of ruination.

Sincerely,

Lowell Sumner

Lowell Sumner, Chairman, Glenwood Community Recreation Center Board

Enclosure: Effects of Sonic Booms on Human Health -- The Air Force Claims and the Reality

cc: Catron County Commissioners and Technical Consultants
Residents of Catron County

EFFECTS OF SONIC BOOMS ON HUMAN HEALTH

The Air Force Claims (in their DEIS for the Reserve Area) and The Reality. Presented at the Public Hearing Conducted by the Air Force in Reserve, Catron County, NM, October 20, 1983

by

Lowell Sumner, Research Biologist

The Air Force admits that its dog-fighting supersonic aircraft would create thirty to forty sonic booms per day, some of which would crack plaster and break windows. But they claim that such shocks are "not known to cause any health hazards to individuals living beneath the area" - - and they estimate that only two or three booms per day would be heard by any one individual in the entire Reserve MOA; and, at worst, they say, only six people would be "highly annoyed".

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Calculations by opponents indicate that three or four times as many booms would be heard by any one individual and many more individuals would be involved; in addition, serious health hazards would result from the prolonged bombardment.

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Our original paragraph-by-paragraph analysis of these Air Force claims totals over 20 pages, and of course the presentation tonight has been greatly condensed for the few minutes allotted. But the complete review will be presented to the Air Force, and to our Senators, Congressman and Governor, before the November 4 deadline.

A sales prospectus presents its point of view in the best possible light. Hazards or drawbacks are down-played,

or not mentioned at all. The new Air Force Environmental Impact Statement (DEIS), attempting to show virtually no harmful effects from sonic booms, follows this pattern. In Appendix E it buries an adverse health forecast by a University of Texas authority under a load of largely irrelevant Air Force comments.

Results of world-wide research on stress have been summarized in two books for the general public by Dr. Hans Selye, an international authority who pioneered a vast new field of research on the subject which started in the '30s and continues in full swing today. Selye defines stress as "the rate of wear and tear on the body". Modern medecine attaches great significance to research findings concerning stress on human beings.

Fifty years of stress research show that a typical stress reaction is produced by the "startle effect" of loud noises such as sonic booms, which are roughly equivalent to the explosion without warning of a stick of dynamite in your back yard. Whenever a person (or an animal) is startled, an age-old, uncontrollable reflex takes place within the body, preparing it for fight or flight. The body is immediatedly flooded with adrenalin and other potent internal secretions (hormones) to give it extra energy and endurance for the emergency.

Because this kind of stress reaction is completely automatic, like the blink of an eye when threatened, one can never get "used" to sonic booms. If continued over a long period, exhaustion of the powers of stress resistance follows; the body then loses control of the prolonged flooding by hor-

mones and they proceed to overstimulate and attack vital organs: blood pressure stays high and heart rhythm changes.

Development of stomach ulcers is one of the commonest early signs of such long-continued stress. Sleeplessness is another. Hypertensive kidney disease, tooth decay, tuberculosis, arthritis, lowered resistance to infection, numerous irreversible degenerative diseases and premature aging are some of the consequences that eventually follow. Because of the lowered resistance, some forms of cancer have been implicated.

Not mentioned by the Air Force is the discovery that each of us appears to be born with an inherited and unchangeable total reserve of stress resistance. Each exposure to stress, despite the recovery brought by rest, leaves a small chemical "scar" or insoluble residue in the cell structure and uses up a portion of our total life reserves of stress resistance.

p.274 Dr. Selye points out that "aging is not determined by the time elapsed since birth but by the total amount of wear and tear to which the body has been exposed". For this reason, elderly people would be the most vulnerable to a daily bombardment by sonic booms.

By contrast, the Air Force summarizes its approach to this hazard when it states that "house rattles appear to be the most sensitive effect of sonic booms"; and "there is no evidence known to us of direct physiological injury due to exposure to sonic booms"; and "Until such proof is forthcoming, such possible effects must be ignored in the planning

or decision-making process. If we do not ignore these conjectures . . . the question is should we have an industrial civilization at all . . . a few sonic booms would be only a small contribution to the average person's total noise experience".

So much has been learned about the consequences of long-continued stress, that the present Environmental Impact Statement (DEIS) must be judged inadequate to comply with the Act of Congress when it ignores the subject or tries to dispose of it by estimating that only six people in the entire county will be, at worst, "highly annoyed". 157

Clearly, to correct and revise the current Air Force DEIS with respect to the effects on human health of prolonged stress from sonic booms, full account must be taken of current knowledge resulting from 50 years of medical research. 158

To qualify, the present document would have to be rewritten to present <u>all</u> the known facts: the truth, the whole truth and nothing but the truth. This is what Congress intended.

P.O.Box 278, Glenwood, NM 88039
October 28, 1983

PROPOSED SUPERSONIC FLIGHTS OVER THE

RESERVE MILITARY OPERATIONS AREA

Headquarters Tactical Air Command / DEEV
Langley AFB, VA 23665

Gentlemen:

In accordance with Air Force letter of June 29, 1983, transmitting copy of your DEIS on the above subject, and your subsequent announcement of closing date change for written comments from September 30 to November 4, I enclose comment entitled Effects of Sonic Booms on Human Health --the Air Force Claims (in their DEIS for the Reserve MOA) and the Reality.

Residents of Catron County,N.M., deeply regret the necessity of opposing you, who are traditionally considered our defenders, but this proposal allows us no choice. Our health, our property, not just our convenience (as in your case) but our whole future is at stake.

New Mexico is high on the list of states that have given up large areas for military purposes -- in our case 17 percent of the state or over 13 million acres. And because our people are intensely patriotic we are correspondingly disillusioned, scared and outraged when the Air Force attempts to deceive us with the false reassurances contained in the present DEIS.

In the spirit of Winston Churchill's famous words, we shall fight you now and in the future, at every level of encounter, if you insist on doing this ruinous thing to us. And if you think the County is stirred up now, you would find this to be tame compared to the furious uproar if our people were ever to be blasted by a dozen or more sonic booms per day.

Looking back at the first hearing of October 2, 1979, it seems too bad, not only from our standpoint but from yours as well, that you did not decide at that time to leave us in peace, because now we are more alarmed, organized and determined than ever, and opposition to inflicting sonic booms on defenceless residents is beginning to spread beyond our own local area.

I believe our people would be willing to forgive and forget the deception on which your DEIS now rests if you would decide to protect us rather than ruin us -- by abandoning your supersonic flight proposal for the Reserve area.

Sincerely,

Lowell Sumner

Lowell Sumner, Chairman, Glenwood Community Center Board

Attachment

cc: Catron County Commissioners and Technical Staff
Senators Domenici and Bingaman; Congressman Richardson; Governor Anaya
Catron County residents

Via Certified Mail, Return Receipt Requested

EFFECTS OF SONIC BOOMS ON HUMAN HEALTH
A Review of the Air Force Claims
(in their DEIS for the Reserve MOA) and the Reality

by

Lowell Sumner, Research Biologist

Digest

I. Conclusions

In order to comply with Federal requirements governing the preparation of Environmental Impact Statements the present DEIS must be reorganized and rewritten to give adequate consideration to very important findings concerning the effects of long continued stress, including sonic booms, on human health.

II. Organization of This Review

III. What the Worthington Report Says Concerning Health Effects of Sonic Booms

Eighty three references are cited to support its contention that the continued stress of loud sound from sonic booms endangers human health.

IV. The Air Force Denies Health Damage by Sonic Booms

It claims permanent damage to human health by sonic booms is unproven, the effects are reversable and only about 6 people will be, at worst, "highly annoyed". Claims "house rattles" are the principal cause of annoyance.

V. The Air Force Critique of the Worthington Report

AF: Delayed response to citizens' claims for minor damage are the chief complaint against sonic booms.

AF: Sonic booms threat to human health unproven.

AF ignores an entire field of stress research proving irreversible consequences do result from prolonged stress.

VI. Current Knowledge of Prolonged Stress Effects on Human Health

History of stress research

International status of Hans Selye and others, proving prolonged stress irreversibly damages human health

Stress effects explained to the public

VII. Summary

So much has been learned about the consequences to human health of long continued stress, including sonic booms, that the present DEIS by ignoring this aspect of the subject is inadequate to comply with the Federal law that requires the Preparation of Environmental Impact Statements.

If the DEIS is to present the truth, the whole truth and nothing but the truth, full account must be taken of conclusions on stress resulting from fifty years of medical research.

I. Conclusions

A sales pitch, whether in a mail order catalog or a prospectus, is designed to present its point of view or "product" in the best possible light and as reassuringly as possible. If there are any hazards, penalties or drawbacks they are downplayed, or if possible, not mentioned at all.

The current Air Force "Draft Environmental Impact Statement" (DEIS), purporting to show virtually no harmful effects from sonic booms in the Reserve Military Operations Area (MOA), follows this pattern. It minimizes many of the known adverse effects of sonic booms on human beings. It ignores fifty years of world-wide research on irreversible damage by stress, such as sonic booms, to human health. And it buries in Appendix E Dr. Richard D. Worthington's adverse health report under a load of largely irrelevant commentary by Air Force personnel.

Although the main body of the DEIS seems designed to withhold rather than to present the most significant information on this subject, the summary, presented at the front of the DEIS, even before the Table of Contents, is watered down even further. Of course it is placed there because the formidable bulk of the document with its imposing collection of tables, figures, lists of government agencies consulted, literature cited, etc., will discourage most people from reading

further.

By contrast, a genuinely scientific analysis would present an objective treatment of all the positive and negative effects of the proposed program, based on the realities of the situation. Congress passed the Act requiring Environmental Impact Statements with this requirement in mind. Accordingly the present DEIS must be revised to present all the known facts -- the truth, the whole truth, and nothing but the truth -- in order to meet the requirements of Federal law.

II. Organization of This Review

Since discussion by the Air Force of sonic boom effects on human health is incomplete, the conclusions of medical researchers quoted in the Worthington Report will be presented first, in Section III. Next, in Section IV, are presented numerous statements by Air Force personnel attempting to deal with or ignore the conclusions of medical research, and to paint a reassuring picture of inconsequential and short-lived effects on human health. These statements illustrate the Air Force strategy; which occupies a major part of the DEIS.

Next, in Section V, is our review of Appendix E in which the Air Force presents the Worthington Report in full and attacks it in detail, ignoring the considerable body of medical research on which the report is based.

This in turn leads to Section VI, in which we present current knowledge regarding the stress effects of long

continued sonic booms on human health, based on fifty years of world-wide medical research, pioneered by Dr. Hans Selye, on the whole subject of stress.

III. What the Worthington Report Says Concerning Health Effects of Sonic Booms

A report on "The Potential Health Effects of Sonic Booms on Human Population" (1978) by Dr. Richard D. Worthington, University of Texas at El Paso, showed that loud sounds of whatever frequency within the range of human hearing, whether short-pulsed or continuous, produce the same general effects within the human body. All studies of these effects on man and animals indicate that continuous programs of sonic booms should not be inflicted on humans without further investigation of their long-term effects.

The Worthington Report showed that hearing loss can occur in animals exposed to simulated sonic booms over a long period of time, and therefore probably in humans. However, other effects of long continued sonic booms on human health were considered to be more damaging and even more likely to occur. As the Worthington Report makes clear, any kind of sudden assault on the body, including loud sounds, produces a state of stress which calls forth a flood of internal chemical secretions designed to stimulate the heart and blood vessels, inhibit digestion, change blood sugar levels and prepare the body for the age-old reactions of flight or

fight.

These reactions are purely involuntary, and are so automatic that no one can ever get used to the "startle effect" that calls them forth. One is just as startled at the two hundredth sonic boom as at the first one, and in the meantime one's body has been over-stimulated two hundred times, and because of the resulting hypertension, and the cumulative effect of so many internal chemical releases, it is beginning to wear out. Stomach ulcers become common at this stage as health begins to deteriorate.

The Worthington Report shows further that studies of prolonged sound stress on animals show, in addition to the above, heart enlargement, thyroid degeneration, decreased resistance to disease, decrease in fertility, birth defects and abnormal growth. Parallel deterioration in humans under prolonged stress has been demonstrated in research by Hans Selye and others, to be discussed later. Eighty three references to medical literature are cited in the Worthington Report to support its contention that the continued loud sound of sonic booms endangers human health.

IV. <u>The Air Force Denies Health Damage by Sonic Booms</u>

In the current DEIS, the Air Force cites (pages 3-13 to 3-17) about 13 references (in a bibliography of 108 on miscellaneous subjects) in an attempt to show that permanent damage to human health by sonic booms is unproven,

that the effects if any are reversible, and that only about six people in the Reserve MOA may be, at worst, "highly annoyed". Their statements in support of this contention are quoted and analyzed in the following 19 paragraphs of our review (ending where Section V begins). Regrettably, this material is somewhat repetitious, but as evidence of Air Force thinking it is significant. Those who are already convinced that vital facts have been played down or ignored might skip the detailed analyses in Sections IV and V, and read Sections VI and VII.

The Air force Quotes References - What They Say:

Reference #69 DEIS pg. 3-14

A "Sonic Boom Literature Survey" done in 1973 by or for the Federal Aviation Administration is quoted without details to the effect that sonic booms tend to degrade visual, steering and tracking tasks in some people but not in others. Work, rest, school and other daily activities are affected but there is no consideration of the cumulative adverse physiological effects resulting from prolonged exposure to such sound.

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Reference #92 DEIS pg. 3-14

An Environmental Protection Agency report of 1974 is quoted to the effect that whereas the noise made by pile-driving, metal working, hand guns, fire crackers and cap pistols "may irritate, startle and awake people", they get used to such noises when repeated. Again no consideration of the cumulative adverse physiological

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151 effects that would result from continued exposure to such sound. 152

Reference #95 DEIS pg. 3-14

A report in 1981 on "The Effects on Human Health from Long-Term Exposure to Noise", by the Committee on Hearing, Bioacoustics and Biomechanics, "Monitoring Agency Office of Naval Research" (!), indicated that the "startle reactions" made people "jump" and caused a slight increase in rate of heart beat, but that "changes were momentary and disappeared within a few seconds after exposure", while there was "a tendency to habituation after about ten sonic boom exposures". Still no consideration of long-term physiological effects, no measurements of critical physiological stress symptoms such as increases in adrenalin, noradrenalin, steroids, or cortical blood volume. The report concludes that "an attempt should be made to obtain more critical evidence".

Reference #108 DEIS pg. 3-15

A report issued in 1973 by the Air Force on "Primary Components of Simulated Air Bag Noise and Their Relative Effects on Human Hearing", showed "small temporary changes in hearing [that] were mainly caused by the high frequency noise and not the low frequencies as found in . . . sonic booms". From these irrelevant observations the Air Force does not consider sonic booms proposed for the Reserve area to endanger hearing. The question of irreversible physiological damage seems to be entirely outside their awareness.

Reference #107 DEIS pg. 3-15

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A report in 1982 on "Prenatal Effects of Exposure to High Level Noise" by the Committee on Hearing, Bioacoustics and Biomechanics, "Monitoring Agency, Office of Naval Research", states that "there is no conclusive evidence of detrimental effects of high intensity external sound in higher mammals". But the Air Force itself states in the preceding report on air bag noise that "small changes in hearing were mainly caused by the high frequency noise and not the low frequencies as found in sonic booms" (itallics ours). Consequently, this report appears to be irrelevant.

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Reference #55 DEIS pg. 3-16 and D-9

An article, by K. D. Kryter et al of Edwards Air Force Base on "Psychological Experiments of [sic] Sonic Boom Experiments at Edwards Air Force Base" (1976) records that residents of the base and of two nearby communities reported to interviewers their psychological reactions to sonic booms in the range of 1.5 to 3.0 psf., duration of test program not stated. Fifty percent of the people in the two communities felt that sonic booms experienced indoors were unacceptable, 59 percent felt the same about sonic booms experienced outdoors. As usual there were no tests of long-term physiological effects.

The article states that ". . . it is more likely that noise related to general ill health effects are [sic] due to the psychological annoyance from the noise . . . than it is from . . . reflexive response. The psycholog-

ical stresses may cause a physiological stress reaction that could result in impaired health", which seems to mean, if anything, that the "startle effect" is real but has bad results because people don't like it.

Under such the line of reasoning quoted above existence of the body's automatic stress reactions is denied, or is not known to exist, despite the extensive medical literature which shows that "startle effects" produce chemical secretions (hormones etc.) which, if long continued, cause irreversible organ deterioration.

References #100 and 93 DEIS pg. 3-16 and D-10

The Air Force did try on one occasion to assess the effects of sonic booms on populations over a span of several months. However this assessment was made by mathematical calculations of something called "<u>average</u> day-night sound levels" that were used in a draft version of "Guidelines for Noise Impact Analysis", issued by EPA in 1980, together with "Environmental Criteria and Standards", issued by the U. S. Department of Housing and Urban Development.

The futility of such an effort lies in the fact that sonic booms over the Reserve area would come as single, hammer-like shocks, not as continuous day and night sounds. Thus despite elaborate equations and talk of "the logarithmic average of C-weighted sound exposure level of individual booms . . ." etc., these Air Force calculations are like trying to draw conclusions about the nutritional characteristics of eggs from an analysis of oranges.

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References #40 and 106 DEIS pg. 3-16

Next the Air Force tries to relate the resulting figures for "average sound" to "Guidelines for Preparing Environmental Impact Statements on Noise" (1977), and to "Assessment of Community Response to High Energy Impulsive Sounds" (1981), both by the Committee on Hearing, Bioacoustics and Biomechanics. The latter report covered a social survey, in collaboration with Wright Patterson Air Force Base, of residents of Oklahoma City who were subjected to eight sonic booms per day for six months in 1964.

D-8

The Air Force does not reveal the extent of "startle effects" in relation to the health of the Oklahoma residents, but only that, "over-pressures . . . ranged from 0 to 3.5 psf", that almost three thousand adults were interviewed, and that (under an unknown degree of encouragement by interviewers) "at the end of the test seventy three percent of the total group felt they could learn to live with eight booms per day indefinitely", whereas twenty seven percent obviously could not.

D-8

In a seven month test by the Air Force, together with NASA and the FAA, of population reaction to sonic booms producing up to 3 psf over St. Louis in the 1960's, "about 90% experienced some interference with speech, activities etc., about 35% were annoyed . . . no adverse physiological effects were noted". Extent and results of critical physiological tests, if any, are not given, only results of oral interviews, at least in the present DEIS.

D-9 Studies in Russia and Canada are mentioned, again with no consideration of long continued stress effects.

D-10 Another report by the Committee on Hearing, Bioacoustics and Biomechanics, chaired by the Office of Naval Research, on "Proposed Damage Risk Criterion for Impulse Noise (Gunfire)", considered hearing risks from gunfire, computed over a twenty year period, and recommended no more than 140 decibels, which would equal approximately 4.17 psf of sonic booms. No data on stress damage.

The Air Force conclusions concerning the effect of sonic booms, derived from all of the preceding largely irrelevant and unscientifically obtained data, are:

1. The most frequent complaints are about house rattles and vibrations.
2. Booms heard outdoors are slightly less acceptable than those heard indoors.
3. In all tests, "no evidence of direct personal injury". (Would being thrown off a panicked runaway horse on a rocky canyon slope with broken legs and fractured skull, be considered <u>indirect</u> personal injury from a sonic boom?)
4. "An acceptable sonic boom over-pressure compatible with undisturbed sleep cannot be given."

155 155

From the above review of Air Force documentation one cannot escape the conclusion that the relevancy of most of the noise studies is forced, the comparison between the "startle effects" of sonic booms and average

156 156

day-night industrial and city noises is contrived, and the long-term physiological damage is ignored. 156

Therefore this entire exercise to allay public fears as to projected sonic boom extent and the effects on human and economic health, is in its present form grossly misleading and futile.

V. The Air Force Critique of the Worthington Report

The conclusions of the Worthington Report have been summarized in Section III of this DEIS review. Next, the considerably different predictions of the Air Force regarding the effects of sonic booms in the Reserve MOA have been covered in some detail (Section IV). However, in addition to its general remarks on sonic boom effects, the Air Force has attempted in Appendix E, to criticize the Worthington Report in detail. 157

The Air Force states that it has been unable to find any other commentary leading to conclusions as "pessimistic" as those of Dr. Worthington, which appears to indicate that they have been unable to locate the hundreds of published findings of Dr. Hans Selye and other researchers on stress, as well as those of sixty medical workers quoted in the Worthington Report.

DEIS
. E-21

Perhaps because of this lack of acquaintance with the basic literature on stress, Dr. Charles W. Nixon of Wright-Patterson Air Force Base feels able to dismiss the Worthington Report with such comments as " . . . the tolerance of the exposed population to these events [booms] will be influenced by the extent and nature of the public

information about the booms prior to and during the program . . . Delayed investigations of minor claims [for damage to property] . . . are believed to be major contributors to reduced tolerance to sonic booms". Property damage was not a concern of the Worthington Report.

DEIS pg. E-21 Nixon continues, " . . . there is no confirmed instance known to us of human ear drum rupture caused by

pg. E-21 sonic boom . . . there is no evidence known to us of direct physiological injury due to exposure to sonic

pg. E-22 booms". He concludes " . . . Whether sonic booms (and loud noise) produce adverse health effects on man involving his cardiovascular system, endocrine system, hypertension and the like is still an open question".

Such an expression of personal opinion would appear impossible from anyone acquainted with current very extensive knowledge of stress and its effects on human health. He tries also to draw a distinction (attempted elsewhere in this DEIS) between the involuntary stress reactions caused by the "startle effect" and an intensification of these involuntary stress reactions by emotions of anger and fright that instantly follow the "startle effect". The destructive chemical reactions within the human body make no such theoretical distinction.

pg. E-23 Air Force Lt. Col. Daniel L. Johnson, in his critique of the Worthington Report, mentions K. D. Kryter's paper on "Effects of Noise on Hearing", but this is

largely irrelevant because such effects, where they exist, are of secondary consideration compared to concern over the build-up of chemical poisons (as they ultimately become) resulting from long continued stress.

Johnson then quotes from "the EPA Criteria Document on Noise" (1975) which states, "Noise can elicit many different physiological responses. However no clear evidence exists indicating that the continued activation of these responses leads to irreversible changes and permanent health effects." However, Worthington points out in his rebuttal (Jan. 23, 1980) of the Air Force critique that in the above statement hypertension and gastrointestinal lesions from continous exposure to the "startle effect" would not be classified as "irreversible" or permanent because <u>in theory</u> they might be cured in their early stages <u>if</u> the victims, of Reserve and Glenwood for example, were able to sell out and move away. Of course members of the Air Force can be transferred at no cost to themselves to other areas and therefore need not consider the realty faced by others, but in the case of Glenwood and Reserve residents, no one else would be willing to buy them out, because of the noise, at a price sufficient for them to purchase equivalent property amid surroundings of a quality comparable to their original homeland before it was ruined.

Moreover, as in so many discussions elsewhere in this DEIS, the Air Force again ignores the findings of Selye and hundreds of others that long continued stress of this

kind does lead to irreversible deterioration of internal organs and functions. As Worthington points out, hypertension might in a theoretical sense be considered "reversible" by someone not permanently saddled with it, but it causes large numbers of deaths each year. Likewise, in real life, gastrointestinal lesions -- one of the earliest and commonest symptoms of prolonged and damaging stress -- together with related organ deterioration, prove to be irreversible and even lethal for thousands of people who cannot move away from the sources of their stress.

EIS
g. E-23

Johnson goes on to quote from an introductory paragraph to a chapter on "Physiological Effects of Noise" by William Burns in "Handbook of Noise Control" (1979), to the effect that " . . . studies of physiological effects contain difficulties of observation and interpretation. Where human laboratory studies are used, projection to real life situations may be misleading . . . All of these considerations enjoin caution in the acceptance of conclusions of any study in this field".

In reply, Worthington, in his above-mentioned rebuttal, p. 4, agrees that, "caution" must be used in accepting conclusions from such studies, but, "In view of the many studies we presently have that indicate adverse health effects from continuous exposure, what about exercising the same caution in regards to exposing individuals in the future? It is possible to pick almost any study and say that such and such was not adequately controlled.

However, we have an added consideration here. Many studies have now been completed that show that man is adversely affected by exposure to loud noise for long periods of time. These studies cut across different industries, cultures and environments, but all have in common the exposure of individuals to loud noise. One can clutch at straws and say, 'to be scientifically objective' something is wrong with each study. This is clearly an unreasonable approach". 158

By way of example, Worthington quoted at this point the findings (quoted in Parade, Dec. 2, 1979) of the Federal Health Agency of West Berlin concerning workers in a bottling plant where the average noise level was 95 decibels. After several days of wearing ear covers their blood pressures went down. When the ear covers were removed their blood pressures rose. The environment remained the same. 158

This type of controlled study undercuts the authorities quoted by Nixon and Johnson in their contention that other environmental factors have not been controlled or screened out. Worthington also points out that sonic booms are many times louder than the 95 decibel background noise in the factory in West Germany.

DEIS pg. E-24

In a technical discussion of the loudness and sound frequencies of sonic booms, Johnson implies that the Worthington Report is "somewhat off the mark" in its discussion of the range of sonic boom frequencies. Johnson claims that most of the frequency range of sonic booms 159 159

is non-auditory, though causing house rattles. Worthington dismisses this argument by quoting researchers who have demonstrated that (1) sonic booms produce a true "startle effect", and (2) no getting used to sonic booms is possible.

)EIS
)g. E-25

Johnson calculates that any one individual in the Reserve MOA will experience only about two or three sonic booms per day, but this estimate is based on the theoretical assumption that the dog-fighting trainees will busy themselves with the demanding navigational task of confining themselves within a 22 mile long ellipse while engaged in aerobatics with an adversary at closing speeds of 1200 or more miles an hour. If such precise navigation were possible in combat the Air Force would not be demanding the large MOA now under consideration.

By contrast, Worthington considers it "possible that others living near areas of greatest use . . . will hear most of the booms every day". Moreover, since any such boom produces the automatic "startle effect", even two booms per day, day after day, week after week, month after month, for years, always with no habituation, will eventually result in the irreversible deterioration of health predicted by Selye and others.

)EIS
)g. E-26

Johnson further indicates his lack of understanding of the effects on health of chronic stress when he states that <u>if</u> he lived in an MOA he "could easily accept the proposed supersonic over-flights provided if a window is broken I could get it replaced without a hassle . . . In other words if the Air Force is not reasonable in how

they handle minor damage to structures, then I would campaign vigorously to prevent them using the area in which I lived for supersonic maneuvers".

Apparently he would equate a broken window that is not promptly fixed with being "highly annoyed", thus giving grounds for preventing the area's use for supersonic flight practice. How still more convincing, then, would be the reasons for Catron County residents to oppose the threat to health and property values presented by such flights.

When Johnson quotes the following statement in Kryter's previously mentioned paper: "there is no likely damage risk to a person from the possible unconditioned stress responses to noise that are mediated by the autonomic system", the impression is given that neither Johnson nor Kryter is aware of the great body of medical research that contradicts them. "When experts disagree", the public may wonder whom to believe, but when one side shows no awareness of the other side's accumulation of facts, the label of "expert" can hardly be applied equally to both disputants.

191

191

DEIS
pg. E-27

In concluding his critique of the Worthington Report, Johnson states, as before, that "with most non-auditory research . . . clear cause and effect relationships have not been found". Being unaware of the previously mentioned findings on noise in the West Berlin bottle factory, and of a large body of similar findings, he again implies that feelings of insecurity in noisy indus-

162

192

trial areas are the cause of high blood pressure and other stress symptoms, rather than the noise itself. 162

From that unfounded assumption he proceeds to the Air Force's key conclusion: "Until such proof [that loud noises cause stress] is forthcoming, such possible effects must be ignored in the planning or decision making process. If we do not ignore these conjectures . . . the question is should we have an industrial civilization at all . . . a few sonic booms would be only a small contribution to the average person's total noise experience". The underlining is ours!

)EIS
)g. E-28

His final contribution: "Annoyance, largely due to house rattles, will occur. This annoyance can be quantified and an acceptable exposure defined. This should be done". Does this reassure?

The Air Force conclusions, somewhat repetitiously quoted in the foregoing sections of the present DEIS review, reveal the depth of Air Force ignorance of, or disregard for, the realities of a sonic boom threat to citizens in the Reserve MOA. Presentation of further evidence on this matter might be superfluous except that findings from fifty years of medical research on stress must be summarized here as briefly as possible to make clear both the enormous ignorance of the Air Force and the enormous consequences if it were to carry out its proposed program.

VI. Current Knowledge of Prolonged Stress Effects on Human Health

"Not only will men of science have to grapple with the sciences that deal with man, but -- and this is a far more difficult matter -- they will have to persuade the world to listen to what they have discovered. If they cannot succeed in this difficult enterprise, man will destroy himself by his halfway cleverness". Bertrand Russell.

Stress is defined as the rate of wear and tear on the body. Hans Selye

History of Stress Research

Modern medical understanding of stress and its effects on living organisms, including man, began to take shape in 1936 when Dr. Hans Selye's pioneering medical research, commencing in 1925, led to the discovery that, in man, hormonal hyperactivity resulting from long continued stress can produce many degenerative diseases, including hemorrhage, high blood pressure, hypertensive kidney disease, peptic ulcers, arthritis, asthma, insomnia, back pains, migraine headache, vomiting, diarrhea, constipation, tooth decay, tuberculosis, lowered resistance to other diseases and sometimes cancer.

As a result of this discovery, whole new fields of research on diseases of man and animals were opened, from the periodic die-offs of voles, lemmings and snowshoe hares to certain human illnesses that turn into rampant epidemics during wars and famines. Thousands of medical workers were attracted to these fields, leading to the development of new understanding, and methods of treatment.

Selye's International Stature

During over fifty years of research on stress at McGill University, Montreal, and as Director of the Institute of Experimental Medicine and Surgery, and President of the International Institute of Stress, University of Montreal, Selye produced a very large number of books and hundreds of articles. These were addressed to researchers and medical specialists, and included contributions to successive volumes of the Encyclopedia of Endocrinology, as well as a text book on Endocrinology.

The World Congress of Medical Psychology called Selye's concept of stress, "Breathtaking in scope; it has permeated medical thinking and influenced medical research in every land, probably more rapidly and intensely than any other theory of disease ever proposed".

Stress Explained to the Public

Selye's first book for the general public, "The Stress of Life" (McGraw-Hill) appeared in 1956. After more years of research and further medical contributions he produced a second book for the general public, "Stress Without Distress" (J. B. Lippincott) in 1974. In this non-technical volume, which was intended to show people how to enjoy life with the least amount of stress, he first identifies the <u>temporary</u>, non-harmful, <u>pleasant</u> kinds of "stress" which arouse bodily functions moderately without the harmful production of excessive amounts of hormones. Examples are going for a walk or a swim, playing the piano, attending a concert, dancing, etc. He then warned of the hazards of

continuous, harmful, unpleasant kinds, which he termed "distress" to accentuate the contrast.

Since by no stretch of imagination, logic or sophistry can sonic booms be considered pleasant or beneficial, the present review of modern research findings on stress is confined to the unpleasant, harmful kinds, called "distress" in Selye's recent popular volume but simply "stress" by other workers, and by this review.

In his latest book Selye first calls attention to the basic finding of the '30s which underlies all modern stress research: Human and vertebrate animal bodies are constructed and programmed by their heredity to react protectively to all kinds of harmful stress with a very generalized, age-old but positive adaptation which consists of three stages: (1) the alarm reaction (fright or "startle" and preparation for flight or fight), (2) the resistance or temporary adjustment stage, which consists of flooding the body with hormones, including adrenalin and noradrenalin, plus other chemicals, to give the body more strength and energy for the emergency, (3) the stage of exhaustion, which follows after long continued exposure and failing adjustment to the same stressor. In this stage the powers of adaptation are exhausted, and the prolonged chemical flooding that characterizes stage (2) attacks vital organs (stomach ulcers and other numerous ill consequences have been mentioned previously). When this point is reached organ deterioration becomes irreversible, aging processes accelerate and the individual dies prematurely.

Not mentioned by the Air Force is the medical discovery that each of us appears to be born with an inherited and unchangeable total reserve of stress resistance. Each exposure to stress, despite the recovery brought by rest, leaves a small chemical "scar" or residue in the cell structure and uses up a portion of our total life reserves of stress resistance. Indeed, "The length of the human life span appears to be primarily determined by the amount of available adaptation energy . . . constant exposure to any stressor will use it up ("The Stress of Life", pg. 209). Thus "aging . . . is not determined by the time elapsed since birth, but by the total amount of wear and tear [stress] to which the body has been exposed" (ibid., pg. 247). Thus elderly people would be the most vulnerable to a daily bombardment by sonic booms.

An example of the very latest research on stress effects and its application to the improvement of health is provided by an article in "Executive Health" (XIX, No. 10, July, 1983) on emotional attitudes and the effects of stress on the body's immune defence system, by Dr. Joan Borysenko of Harvard Medical School and Dr. Myrin Borysenko of Tufts University School of Medicine. We need not quote from their article, since it only reinforces what we have already quoted from others on the subject. It is mentioned here to demonstrate how very current and active is the state of such research.

VII. Summary

Clearly, to correct and revise the current Air Force

DEIS so as to present the whole truth concerning the effects on human health of prolonged stress from long continued sonic booms, full account must be taken of conclusions resulting from fifty years of medical research on stress, as exemplified by references to this literature in the Worthington Report and in the many reports of carefully controlled experiments by Selye and others, including results presented in the Encyclopedia of Endocrinology, American Journal of Physiology, Lancet, British Medical Journal, Journal of Comparative Physiology and Psychology, Proceedings of the International Congress on Noise as a Public Health Hazard, Journal of Human Stress, as well as stress research conducted under the auspices of the International Institute of Stress, and by medical schools across the country. 163 163

So much has been learned about the consequences of long continued stress, including sonic booms, on human beings that an Environmental Impact Statement that ignores the subject, or tries to dispose of it by dismissing stress-affected persons as being few in number and, at worst, "highly annoyed", must be judged wholly inadequate to comply with the Act that Congress established to protect the environment and its inhabitants.

J. J. HEYNEKAMP, M.D.

J. J. Heynekamp
Box O
Reserve, NM 87830

October 10, 1983

HQ TAC/DEEV
ATT'N: MR. ALTON CHAVIS
LANGLEY AIRFORCE BASE
LANGLEY, VIRGINIA 23665

Dear Sir:

As a new resident of Reserve, New Mexico I have been aware of plans to use our MOA for Super Sonic dog fights. I moved to this area mainly for the Peace and Quiet. I did spend some time as a volunteer Physician in Vietnam at which time I lived in a house just next to a South Vietnamese Artillery Army Post where they used two 105 mml Howlitzers. The guns were not used very often and the sound didn't bother me too much in the beginning.

After several months however the startling effect of the unexpected firing of the guns started making me very nervous. I became irritable and at times very angry and not able to do a very good job, even when I knew that my safety depended on those guns.

I think our pilots should be trained as good as possible, being convinced that our Armed Forces should be strong and well prepared. I also think that the effect of loud and unexpected booms have a definitely ill effect on persons for whose health I have made myself at least partially responsible. I cannot find in your EIS anything to disprove the fact that loud startling noises are bad for your health. Many of the statements convinced me of the danger involved to people with a wide array of physical and Psychological ailments as well as a perfectly healthy stable and well adjusted citizen. The effects of stress on people is well known.

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Work done on the effect of loud noises to pregnant women has failed to prove to be detrimental to the fetus's health; it also has failed to prove the opposite! Since we are not going to have anything like a "double blind controlled study" of the effect of Sonic Booms to a significant large enough number of pregnant women; I think it is very unethical to assume that it won't harm the unborn babies.

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If you do not find any other alternative I cannot see why you should discriminate against people of Catron County just because there are fewer of them, and the burden of Sonic Booms should be shared by all citizens of the United States alike.

I also do not think that all other alternative for practice over unpopulated areas are exhausted.

If all our protests will prove to be unsuccessful I do not think I will submit myself and my family to this type of harrasment.

SINCERELY,

J.J. HEYNEKAMP, M.D.

1-148

Oct. 2, 1983

Apreciable señor Bingaman,

Le escribo para pedirle su ayuda. Oimos que la Fuersa Aerea tiene intento de volar avion de propulsion a charro en este condado de Catrón.

Yo se que las fursas aereas tienen nececidad de preparar sus pilotos. Pero yo creio que tienen otros lugares donde pueden hacer esto.

Por favor haber que puede usted hacer para que esto no pace.

Su segura servidora,

Señora Paulita J Carrejo

Apache Creek Rt
Roswell, N. M. 88?3?

Senator Jeff Bingaman
502 Hart Bldg
Washington, DC
20510

Nov. 1, 1987

Gentlemen,

I am totally against the U.S. Government's proposal to conduct low level sonic flights over Catron county, N.M. I've been a resident of Catron County since 1977 and will never accept the idea of aircraft in the Gila National Forest Not at 50,000 ft, not at 25,000 ft, not at 25 feet. It turns my stomach. It makes me want to shoot at them (any military aircraft over the Gila) ... with anything I can find. It is trespass. Trespass of the Wilderness Spirit.

I cannot believe the U.S. Government would even consider such an infringement, such a stupid, selfish proposal. It scares me to death to think of such irresponsibility on the part of our Government. Such a sin was tolerable in the 40's and perhaps with our patriotic naiveness of the 50's.

There is no excuse in the 80's. There is too much sophistication, too many alternatives to destroying one of the few remaining wild areas in the southwest.

GOD HELP THE United States if the Air Force is allowed to go ahead with the low level Sonic flights proposal

Frank A Kenney
Box 344
Reserve, New Mexico 87830

1-150

Jeanne & Keith Lay
P. O. Box 607
Reserve, New Mexico 87830
October 18, 1983

Headquarters
TAC/DEEV
Langley AFB, Virginia 23665

ATTN: Mr. Alton Chavis

Dear Mr. Chavis:

My wife and I moved to Reserve, New Mexico (elevation: 6,250 ft.) three years ago for the clean, healthful, quiet environment of this region. We are a young couple working hard to support ourselves and maintain a nice community. We are finishing a house that we are purchasing through Farmers Home Administration.

I am extremely distressed that the U.S. Air Force is unethically seeking to fly supersonic flights at such a low altitude over our populated areas. They are proven dangerous and bothersome to animals and humans, as well as destructive to buildings and personal property. Also, property values will go down if these supersonic flights occur. I deserve to be compensated for any damage caused by anyone; let the Air Force be responsible for their actions. 165 165

We would all much rather see U.S. jets overhead than Russian; however, supersonic booms are too harmful to justify low altitude training over populated areas, especially when viable alternatives exist. Let the Air Force abide by U.S. law and report truthfully the impact to the environment; and also be honest about alternative means of training: White Sands or over ocean flying. I understand thousands of dollars can be saved by better management of this training program, i.e., centralized air space control. 166 166

Please do not allow supersonic booms to destroy what we have worked so hard for.

Sincerely,

Keith Lay Jeanne Lay

Keith Lay and Jeanne Lay

cc: U.S. Senator Pete Domenici
U.S. Senator Jeff Bingaman
State Senator Ben D. Altamirano
Attorney General Paul Bardacke

Elinor P. Shaffner
c/o Box 481
Reserve, New Mexico 87830

October 24, 1983

Hq. TAC/DEEV
Att. Mr. Alton Chavis
Langley AFB
Virginia 23665

Dear Sir: Re the request of the Air Force to fly practice missions over Catron County air space, causing sonic booms:

After gaining information from the EIS and the discussions, dissertations and statements of interested people on both sides of the question at the recent public hearing in Reserve, N.M., I can only ask that the elderly of Catron County be especially considered, since undoubtedly the sudden, terrific noises will have more deleterious effects on them than on any other resident, animal, or property. As the schoolboy asked, "How will the noises affect my grandmother who has heart trouble?" 167 167

Our County is a relatively low income, low-cost-of-living area. For this reason, and because of its natural beauty and rural solitude, it has not only held those who were able to live out their lives here, but has attracted new retired persons, seeking the peace and quiet of its mountain grandeur, finding relief from similar noises and stresses that the Air Force plan is seeking to inflict upon all of those in Catron County.

168 The Air Force does have other alternatives according to much of the information given after careful research. We of Catron County above all love our country, and would suffer much to help keep our country strong; but if it is true that this invasion of the peace and quiet longed for in our last years is truly unnecessary, then we plead with you to do all in your power to prevent its perpetration. 168

I speak for many of our elderly population who are unable to speak for themselves, either at a public hearing or by letter.

We very much appreciate all you have already done on the behalf of Catron County.

Thank You,
Elinor P. Shaffner
Elinor P. Shaffner, Director
Catron Co. Commission on Aging

Tihamer Imre Szombathy
also wife, Mery
& children, Tilla & Imre
Roural Route Apache Creek
Reserve, New Mexico 87830

November 01, 1983

To Whom It May Concern,

Dear People,

I and my wife did not have the opportunity to express our views on the subject of the proposed airforce use of the air space above the Reserve area during the recent public hearing.

The purpose of this letter is to make clear our strong opposition to such activity. We purchased our home only a few years ago. We came here seeking peace, quiet and solitude and because of the unscared beauty of this wilderness. We both feel it is an idealic place to raise a family.

691 The side effects of the air force "dog fighting" over us, with thunderous boombs, would totally destroy the atmosphere of our inviornment. It is obvious that the rest of the area folks feel the same way. 169

If the air force successfully steam rolls over us in spite of us, I feel, it would be a real blow to democracy. I hope this will not happen for it will force us to abandon this country.

Concerned Citizen
and Family,

Tihamer Szombathy

& family

Reserve, N.M.
Oct 20, 1983

Sir
I strongly object to the Combat low level supersonic training flights being proposed by the 49th Tactical Fighter Wing at Holloman Air Force Base, over Reserve, Cruzville, Apache Creek, Cruzo, N.M and parts of our Gila National Forests.

Most people who are new to this area came here to make this there retirement home, after a life time of putting up with city noise and etc.

Others like our selves looked at many places to determine which would be the best for us. We chose Reserve area because of the quietness and the beauty of the Gila Forest in this area. Giving up many convienced, lifetime friends to do so. and investing most of our life time savings and time to building or improving places we have bought, so that in our late years it would be as we hoped, quiet with the time to explore all the area around that we had never had the time to explore while camming up on our summer vacation Camping trips and hunting in the fall.

Our Children and Grandchildren each have looked forward each year to there vacations spent up here, and looking forward to the time they to could settle up here! now all is being changed with the prospect of the supersonic flight pattern being allowed over Catron County - Has removed the idea that they to could have the quiet - the beauty to look forward to for there retirement years. As it would make Reserve Area no more desirable

then the Cities they now live in.

Also, the homes we built up here in Apache Creek is built of Native rock. Already we have cracks in the exterior walls which appeared, not with the settling with time - but during the time when we were building in 1968-69 from the many sonic booms up here at that time.

Our main concern now is, if this is allowed to be, and we can no longer stand the stress of the noise level and would want to sell and leave, who in heavens name in their right mind would want to buy it or up here! Which would leave us setting here and having to put up with it as we couldn't get our investment out to go else where.

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Therefore, I wish to add our names to the many Catron County people who feel the same way as we do about the proposed supersonic flight pattern over our area, and pray this will be canceled and not granted to the Air Force, for the betterment of all who live here.

Sincerely

Mr & Mrs A. J. Palkovic
Apache Creek Rt
Reserve, N.M
87830

Flores
P.O. Box 214
Reserve, N.M.
87830

Dear Sir:

I am writing to you about the recent E.I.S. the Air Force has recently completed regarding pilot training using supersonic F15 jets over Catron county, New Mexico.

I believe that the resulting sonic booms will not be compatable with the multiple use concept of the National Forest.

Most tourists visit the lakes and forested areas of this county to enjoy the peace and quiet which does not exist in the cities. I doubt that many people will continue to visit here if it becomes a supersonic training area. The recreational use of the National Forest is certainly not compatable with frequent unexpected loud noises. 171

The Air Force claims that sonic booms have not interfered with recreational use in the past but 171

this program that is planned here will have louder and more frequent sonic booms than has ever been done anywhere else over a national forest area.

It is true that there are no studies which conclusively prove that humans or animals are adversely affected by sonic booms. But there are many studies which strongly indicate that there are adverse health effects. I don't think the Air Force should proceed until that has been further studied.

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Horses are affected in that they have a fright reaction especially in confined quarters. Ranchers in this area must herd cattle on horseback. They must work with their horses in confined situations. It is dangerous to ride a young horse when a sonic boom occurs.

I hope that the Forest Service plans to strongly object to this plan.

Sincerely
Cathy Lore

FLOYD E CRADDICK
RURAL RT
MAGDALENA
NEW MEXICO

Today this is a quiet andpeaceful little valley, splendid with fall colors and blue-hazed mountains standing guard. If the sonic booms come itwill become a nightmare place, especially for all the older people who have spent their life's savings for a retirement home here. Their land will be practically worthless and they will have no place to go. My husband is an invalid, wehavelived here 45 years, builtup a nicelittle farm andtried to be decent citizens.

173

If it can be proven to us that there isno other equally desirable place for the Air Force to train our boys to protect us, I do not believe there is one person in Catron County who would not say "Roll out the red carpet andwelcomethem in."
But we do not feel that wehave been given that proof " beyond any reasonable doubt " And surely we are not asking too much when we wish to be given that assurance. We are NOT unpatriotic people- Our governmentis made up of human beings just like us, and anyone can make a mistake - all we are askingis that they take a long unbiased look at our situation.

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Floyd & Hazel Craddick
Aragon N Mex 87820

Sir

In reference to the E.I.S. of the Reserve M.O.A. your study does not give much concern for property values or health effects of the few people living in the M.O.A. If there is no effect as your study infers, then there should be no objection to doing your low level super sonic flights over an entire 360° spectrum using Holiman as the apex. If it is so important for National Security to have the low level flights why should one area be asked to be the patriotic and the brave & serve their country without question. I for one am willing to take my time in the barrel if I know

The rest of the nation or at least a large portion of it is willing to do the same. However to tell the people who live in the Reserve MOA. That we have to live in that barrel just because we are few in number is not fair & should not be played by our representatives in Washington

Sincerely
Alan Robinson
Apache Creek
New Mexico 87850

Mrs Nancy Robinson
Apache Angus Ranch
Apache Creek, N.M. 87830

Headquarters Tactical Air Command/DEEV
John O. Rittenhouse
Langley AFB, Va. 23665

October 28, 1983

Dear Sir:

My husband and I are residents of the Apache Creek area, and have owned and operated a ranch in Catron County for the past 23 years. I am writing you in reference to the revised Draft Environmental Impact Statement of theSupersonic Flight Operations, Reserve MOA out of Hollimar AFB.

I do not feel that the DEIS meets the requirements as set out by NEPA in 1969. It does not properly identify the risk to the people, County, property, wildlife or livestock. The revised DEIS is as inadequate as its predecessor. It is misleading, evasive, and does not show what the impact to the people and County would be. Some of the figures and charts are based on incorrect population figures for various areas of the County. The Apache Creek area alone has 116 residents. There are many discrepancies in the DEIS any layperson can find. The population figures on the ellipses in the Reserve DEIS (pg. 3-7) and the Valentine EIS do not have the same figures. The CDN figures shown is the decibel level measured over a 24 hour period, when the sorties are only to be flown during daylight hours. Also, no startle effects are measured. The studies shown on livestock and wildlife were done in Europe where environmental and ranching conditions and practices are vastly different from New Mexico. No data is available showing studies at this elevation, 7000 Ft. Atmospheric and topographical conditions are greatly different from sealevel. No measure of the compounding effect of a sonic boom crossing a narrow canyon with rock wall, such as the one in which we live, has been done. Our homes are made largely of adobe and rock construction in this area, and the damage by sonic booms is already severe. Catron County has a wealth of Archeological ruins which would be devastated by this training mission. Why is the Airforce restricted in flying over National Park Service ruins or the Very Large Array Telescope if no damage will occur by the sonic booms?

As a member of the School Board in Reserve, I am concerned about the impact this would have on the learning process of our students. 30 sonic booms per day would create a stressfull classroom atmosphere where learning processes would be difficult. Our youth deserve an opportunity to an education without the stress imposed on them by sonic booms. I think the draft has ignored the total impact on the schools in our County. No studies are shown of the Super Booms that will occur.

The Economic impact of the sonic boom activity has largely been avoided in the draft EIS. The Airforce did a county wide study on the Sells and Gladden MOA in Arizona. The high population of mtropolitan areas within the county butoutside of the MOA makes the figures mentioned in the study meaningless.

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Catron County derives much of its economy from tourism, hunting fishing and hiking. There is no doubt in any resident's mind the detrimental affect the sonic boom activity would have on the economy of our allready depressed area. As a member of the Catron County Economic Development Committee, I protest the use of Reserve MOA for supersonic training. 178 177

I have attended both public hearings and all meetings with the Airforce concerning this issue. The last hearing where Lt. Col. Ratcliffe presided was a disgrace to the Airforce. He did most of the talking, and would not allow citizens questions to be answered. When anyone spoke showing the inadequacy of the EIS, he told them their time allotted was up. He told students that asked questions of the mission that their question was a statement and could not be answered by the Airforce personnel. During the other meetings with the County Commissioners etc., the Airforce personnel were polite but completely un-informed of the contents of the DEIS or the data pertaining to the mission.

The Airforce discusses the alternatives in the DEIS. The most viable alternative is to use the White Sands and adjacent areas for supersonic training of the F-15. The reason the 49th TAC was stationed there in the first place was that the air space at White Sands satisfied the projected needs for the F-15 jet. Better scheduling and use of the airspace at White Sands would save the government millions of dollars in fuel to train at distant areas like Reserve MOA. (Reserve being over 150 nautical miles from Whitesands). By using weekends as flying time, the White Sands area should handle all the sorties. It seems that the Airforce and Army are unable to work out a schedule for use of the airspace. Another alternative, not discussed, is to re-locate the 49th TAC to an area where they can train supersonically over the ocean which is largely uninhabited. 179 179

In summary, the DEIS does not meet the requirementsof the NEPA 1969 act. I am opposed to any supersonic training in the Reserve MOA. I feel it is a hazzard to our health, property, economy, and way of life. Most of the people who live in Catron County treasure the serenity and remoteness of the area. We would hate to see this taken away from us by the Airforce who was designed to protect us. I request this letter to become a part of the "Comments and Statements" and included in the final EIS for the Reserve MOA.

Sincerely yours,

Nancy Robinson

Nancy Robinson

HQ TAC/DEEV
Langley Air Force Base
Virginia 23665
attention: Alton Chavis

October 27, 1983

Dear Mr. Chavis,

Mr. Smith and I are retired people living on our property in an area adjacent to Apache Creek of Catron County, New Mexico. We are, therefore, within the boundaries of the Reserve Military Operations Area according the the latest Environmental Impact Analysis Process issued by the Department of the Air Force Tactical Air Command, Holloman Air Force Base, New Mexico. We are disturbed by this Pentagon planning of supersonic flight operations of the F-15 immediately above this land area. We have read this draft and totally disagree with any implementation of its proposals. It is essentially a repetition of the 1979 draft with very little improvement in its presentations to the public.

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Economically, we speak, not only for ourselves but include hundreds of others living within this area. We are all very disturbed about a very probable and severe decline in property values, should this training program be administered. Our communities' incomes from visitors, hunters and tourists would be drastically reduced. Who would want to come to our immediate area, or the primitive or the wilderness recreational areas? Many earth-shaking booms will be heard every week and several each day. The State of New Mexico has spent many, many thousands of dollars developing these recreational sites. Why does Congress insist upon preserving our primitive and wilderness area at all? The expensive Rare II Project, therefore, would remain another Congressional fallacy.

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Damage to homes, churches, community buildings and public schools in our populated areas cannot become just an obliterated projection, for damage will occur, by reason of mathematical probability, under such an onslaught of daily sonic booms, especially of the focus type. The inflated labor cost would be more than anyone of us could stand financially let alone hardships incurred by having to travel somewhat over 200 miles in New Mexico for any completed trip to obtain estimates and contracts for repair materials and labor to submit to and satisfy the claims department of Holloman Air Force Base. Many materials for historically valued homes and sites are virtually irreplaceable.

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Possible loss of life and/or injury to humans, livestock, and wild life would seem to demand a prerequisite consideration of all forms of the living.

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The total impact upon our schools has been very much ignored by this new draft. Not only should our school children be given the very highest priority of attention and be safe-guarded against possible injury or death from i. e., weakened school buildings and/or flying glass but also if that weren't enough, losses in their daily "school life attentiveness." Unable to accomplish in learning situations under a sonic boom blasted day would result in the destruction of favorable and acceptable classroom climate, the one necessary element for childhood education if success in learning is expected by the children, the school personnel, the parents, the community, Catron County, New Mexico, and the nation. Therefore, it would seem only fair to our youth, that educationally they should be given every opportunity to learn <u>without</u> exceptionally undue disturbances of severe sonic booms caused by the proposed and concentrated F-15 supersonic training flight program. These young people being educated in the public schools of our locale represent the greatest investment that Catron County posesses. To place them in jeopardy would be a wrongful act.

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We concerned citizens in Catron County, New Mexico, are asking that Congress nor the offices of the Pentagon take any further portions of our state beyond what is already usurped to accomplish what has to be done. As alternative action, we are asking that training flights of the F-15 be conducted in WSMR Proving Ground air space and the Valentine MOA. If less bickering between the Army and the Air Force could possibly take place, there is no doubt that the air space of New Mexico could serve the state's and nation's defense problems. The published draft, so-named above has <u>not</u> addressed itself properly nor offers any solutions toward the resolvement of public issues that we have herewith stated.

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We have one further question coming from the NBC-TV news media, Channel 4, Tucson, Arizona. Statements were made by newscasters recently A Price-Waterhouse audit on our U. S. Defense Department stated that: 35 billion (not million) dollars could be saved out of wasted U. S. Defense Department budgeted monies. If you can, please write to us and give a verification of this statement. The audit was to have been sent to Washington, D. C. However, if this be true, the savings that could be made by the Air Force alone could very well be used to travel the more than 150 nautical miles from Holloman AFB to an area necessary for the execution of their proposal. The above referred to draft states on page IV of their summary that "airspace locations greater than 150 nautical miles from Holloman AFB would result in excessive costs and are not considered viable alternatives."

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A Catron County, New Mexico, Public Hearing with personnel of the U.S.A.F. was held October 20, 1983. The outcome was: <u>NO</u>, Mr. Smith and I will <u>not</u> accept the facts of RDEIS for the following summarical reasons:

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I. The RDEIS has not <u>yet</u> addressed itself properly with its "scientifically" prepared studies nor its acceptance of expert laymen studies concerning these areas of impact.
 A. The safety and related health of up to two thousand

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(2000) children attending the Apache Creek Deaf Ranch, an arm of the ministry of the Temple Baptist Church of El Paso, Texas. (see attached letter)

B. The factors of adverse safety and health of our residents has not been recognized by the fact that the U.S.A.F. would not be responsible for any such result.

C. No studies have been offered concerning an impact on educational achievement of our public school students. Such studies could be made through results of the California Test of Basic Skills and others required of our school children annually. This study, of course, would have to be based over an acceptable period of time.

D. Again, the positive economy of our county would be destroyed:
 1. Physical damage of properties: real and personal.
 2. Ranching income: livestock loss
 3. Lumbering (logging) employment impact.
 4. Wildlife destruction.
 5. Depletion of archaeological knowledge.
 6. Annihilation of tourism: both economically and aesthetically.

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II. In conclusion: There has been no attempt in the RDEIS to address itself "scientifically" to the issues above named nor to a layman's scientific research. (REFER Appendix E of RDEIS.)

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There has been no acceptance of "promise" nor any indication of "promise" that the U.S.A.F. will stay within its own stated boundaries of operation, mainly within its mythical elipses. (REFER RDEIS pp. 3-7 and 4-16.)

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The U.S.A.F. has been challenged about factual (not typographical) errors of the RDEIS, a result of the Air Force and Catron County Public Hearing, October 20, 1983.

These irresponsibilities are not acceptable.

Respectfully,

Alonza Smith

Alonza Smith

Norman B. Smith

Norman B. Smith

cc: The Pantagon, Dept. of Environment and Safety, Wash. D.C. also Dept of the Air Force, Holloman AFB New Mexico



A Ministry of
TEMPLE BAPTIST CHURCH
3333-R Yarbrough Street
El Paso, Texas 79925
915-598-6024

October 17, 1983

Re: Sonic Booms

To whom it may concern,

I am Pastor Dean Lang, Founder and Director of Apache Creek Deaf Ranch. I would like to be in the meeting, but I have to be in Indiana for medical treatment. However, I'm very concerned and feel you need this information in making your decision of flying large numbers of Super-Sonic Planes each day over Catron County. Apache Creek Deaf and Youth Ranch brings young people from aproximately twelve states each summer. We will run between 1000 to 2000 campers each summer. We are also now having more fall, winter, and spring retreats.

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I can not believe that the United States Air Force would even consider flying these dangerous Missions over this territory. Our boys and girls spend a great deal of time each day horseback riding. This becomes especially dangerous for the deaf boys and girls when the sonic booms spook the horses they are riding and they are not aware of what has happened. These boys and girls are between the ages of seven through nineteen. They also take hikes in our valleys and these booms loosen rocks which could fall on them and kill them. We certainly don't feel the Government wants to take on this responsibility.

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I realize these flights and training are important, but surely, they could be done over water and desert land where there is not so many people involved. I protest these flights with the strongest of urgings! Thank you so very much for your cooperation.

Sincerely,

Pastor Dean Lang
Founder and Director
Apache Creek Deaf Ranch

RDL/agj

September 15, 1983

U. S. Senator Jeff Bingaman
502 Hart Senate Office Bldg.
Washington, D.C. 20510

Dear Senator,

Mr. Smith and I are retired people living on our property in an area adjacent to Apache Creek of Catron County, New Mexico. We are, therefore, within the boundaries of the Reserve Military Operations Area according to the ~~the~~ latest Environmental Impact Analysis Process issued by the Department of the Air Force Tactical Air Command, Holloman Air Force Base, New Mexico. We are disturbed by this Pentagon planning of supersonic flight operations of the F-15 immediately above this land area. We have read this draft and totally disagree with any implementation of its proposals. It is essentially a repetition of the 1979 draft with very little improvement in its presentations to the public.

Economically, we speak, not only for ourselves but include hundreds of others living within this area. We are all very disturbed about a very probable and severe decline in property values, should this training program be administered. Our communities' incomes from visitors, hunters and tourists would be drastically reduced. Who would want to come to our immediate area, or the primitive or the wilderness recreational areas? Many earth-shaking booms will be heard every week and several each day. The State of New Mexico has spent many, many thousands of dollars developing these recreational sites. Why does Congress insist upon preserving our primitive and wilderness area at all? The expensive Rare II Project, therefore, would remain another Congressional fallacy.

Damage to homes, churches, community buildings and public schools in our populated areas cannot become just an obliterated projection, for damage will occur, by reason of mathematical probability, under such an onslaught of daily sonic booms, especially of the focus type. The inflated labor cost would be more than anyone of us could stand financially let alone hardships incurred by having to travel somewhat over 200 miles in New Mexico for any completed trip to obtain estimates and contracts for repair materials and labor to submit to and satisfy the claims department of Holloman Air Force Base. Many materials for historically valued homes and sites are virtually irreplaceable.

Possible loss of life and/or injury to humans, livestock, and wild life would seem to demand a prerequisite consideration of all forms of the living.

The total impact upon our schools has been very much ignored by this new draft. Not only should our school children be given the very highest priority of attention and be safe-guarded against possible injury or death from i. e., weakened school buildings and/or flying glass but also if that weren't enough, losses in their daily "school life attentiveness." Unable to accomplish in learning situations under a sonic boom blasted day would result in the destruction of favorable and acceptable classroom climate, the one necessary element for childhood education if success in learning is expected by the children, the school personnel, the parents, the community, Catron County, New Mexico and the nation. Therefore, it would seem only fair to our youth, that educationally they should be given every opportunity to learn without exceptionally undue disturbances of severe sonic booms caused by the preposed and concentrated F-15 supersonic training flight program. These young people being educated in the public schools of our locale represent the greatest investment that Catron County posesses. To place them in jeopardy would be a wrongful act.

We concerned citizens in Catron County, New Mexico, are asking that Congress nor the offices of the Pentagon take any further portions of our state beyond what is already usurped to accomplish what has to be done. As alternative action, ~~we are asking that train-~~, we are asking that training flights of the F-15 be conducted in WSMR Proving Ground air space and the Valentine MOA. If less bickering between the Army and the Air Force could possibly take place, there is no doubt that the air space of New Mexico could serve the state's and nation's defense problems. The published draft, so-named above has not addressed itself properly nor offers any solutions toward the resolvement of public issues that we have herewith stated.

We have one further question coming from the NBC-TV new media, Channel 4, Tucson, Arizona. Statements were made by newscasters recently....A Price-Waterhouse audit on our U. S. Defense Department stated that: 35 billion (not million) dollars could be saved out of wasted U. S. Defense Department budgeted monies. If you can, please, write to us and give a verification of this statement. The audit was to have been sent to Washington, D. C. However, if this be true, the savings that could be made by the Air Force alone could very well be used to travel the more than 150 nautical miles from Hollomon AFB to an area necessary for the execution of their proposal. The above referred to draft states on page IV of their summary that "airspace locations greater than 150 nautical miles from Holloman AFB would result in excessive costs and are not considered viable alternatives."

We thank you for your attentions that you have given to us in the past and will certainly appreciate your help with this above

identified latest situation.

A county-wide public hearing with Air Force personnel has been scheduled for the week of October 10th, but of course any date should be verified. If possible, please attend.

Respectfully,

Alonza E. Smith
Apache Creek Route
Reserve, N.M. 87830
Ph.- 533-6425

LS/na

CC: Governor Toney Anaya
Pete V. Domenici
James Martin
Ben Altamirano
Manuel Lujan, Jr.
Bill Richardson
Jeff Bingaman
Secretary of the Air Force, Washington, D. C.
Tactical Air Command, Langley AFB, VA
Chairman, Catron County Commission
Paul Bardacke, attorney General
Jim Baca, Land Commissioner
Sec. Brant Calkin, Dept. Natural Resources
Larry Jackman, Glenwood, N.M.
Supt. Reserve Public Schools
Catron Co. Firestarter (publishers)

Flores
P. O. Box 214
Reserve, N. M.
87830
Phone - 533-6716

Dear Senator Bingaman,

I wish to compliment you on the fine work you are doing in the Senate, and to ask for your help for Catron county.

The air force recently issued an E I S regarding sonic booming in this county. They plan about 300 a month. Although there are studies which indicate physiological damage to humans, they feel that the benefits outweigh the risks.

As a resident of this county I can not agree. Personally I am worried because my mom had a stroke a few years ago and I fear that the sonic booms may increase her risk of another. There are studies which indicate that hypertension may result as one effect of the booms. There are also other studies which conclude that more testing must be done in order to determine the effects on an elderly population. I do not

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feel that this county should be the unwilling subjects of that testing.

I feel that this issue has a much wider application than just this county. At a meeting in Reserve they admitted that one of the reasons the Air Force chose this county is its sparse population. This issue is one of principle. Should the Air Force be allowed to do something in a sparsly populated area that they would not even attempt in a more populated one? In other words, do we have less rights because there are fewer of us? I hope that despite our low population our voices can be heard.

I realize that you are a very busy man and I hope that you can find the time to help Catron county.

Sincerely

Estelle Reves

1993 NOV 16 PM 12:22

AUG 12 1983 CA Letter # _____ Doc # 18403

Profile (See Code Book)

P. O. Box 214
Kesebrough, N.
87830

Dear Congressman Jeshardson,

I want to compliment you on the work you are doing, and to thank you for the help you have already given Lincoln County.

The Air Force has recently issued another E.I.S. regarding Sonic booms in Catron county. This conclusion indicate that they have every intention of using this county as a training area.

Although there are studies which indicate physiological damage to humans, they feel the benefits outweigh the risks. As a citizen of this county I am not agree. My mom had a stroke a few years ago, and I feel that the sonic booms will increase the risk of another. There are studies which indicate hypertension as one of the possible effect of the booming. There are also studies which conclude that more testing

must be done available to all of the health effects on an elderly people I do not feel that this county should be the subjects for that testing.

Please

flig The main benefit of living here is the beauty and quiet. There are none of the conveniences of an urban or suburban environment. The nearest hospital or large supermarket is 70 miles away. Few people would choose to live here if the Air Force is using it as a testing area for pilots. Sonic booms will destroy the peace and quiet of the area. In effect, I believe that the Air Force would be condemning this area for their use without condemnation proceedings.

I am very worried about the health of my family and other families in the county. I am also afraid that because of the low population here that our collective voice will be to small to be heard. Please continue to help this county in the future. Your efforts in this regard will be greatly appreciated.

Sincerely,

Estelle Hess

Esterly Flores
P.O. Box 214
Reserve, New Mexico
87830

Dear Sir:

I believe the revised EIS does not state the actual effects the Air Force program will have on Catron county.

For instance, there are ample studies indicating that health problems will result. Like many elderly people in this community, my mom is not in good health, due to a stroke a few years ago. Medical evidence indicates that her condition may be aggravated by low altitude sonic booms possibly leading to another stroke which could cause her death. It is immoral to proceed with this program unless accurate, rigorous, scientific studies are done which can prove beyond a doubt that health problems will not result.

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Ranchers in Catron county must herd their cattle, in very rough country, on horseback. Many times they must ride on steep hillsides or the edges of a cliff. The effects loud low altitude sonic booms will have on horses under these conditions have not been referred to in the EIS. I believe that

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horses will react differently, more violently, to a sonic boomm which is heard away from their home range. In order to accurately determine the effects on horses studies must be done in which they are exposed to the same conditions as will exist here in Cation county. I believe that this program will cause severe horse accidents which could lead to crippling or death of horses and riders.

Also the EIS states on page 3-19 "There is a possibility that horses confined in buildings may show and exaggerated response as a result of being alarmed." Obviously this possibility has not been studied to any great extent and it should be. Many people here work with horses in barns. If a horse reacts violently to a sonic boomm in confined space the handler can be seriously hurt. Horses can also sustain serious injury as well. Without further studies the possible effects on people of this county due to horse accidents are not stated in the EIS.

The economic effects to Calhoun county have not been accurately studied either. Economically, this county will be devastated!

The Air Force has other viable alternatives than to begin supersonic flights over populated areas. Many of these alternatives are less expensive. But even if the alternatives were more expensive, it is not ethical to place economic values over the health, safety and possible existence of an entire community. I don't believe that many people will be able to continue living here if loud low altitude sonic booming commences.

I hope that when the Air Force reviews this proposal they will realize that it is the correct and ethical decision not to subject any human population to this type of stress and danger.

Sincerely,

Estuly Flores

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1 November 1983

Hq. TAC/DREV (Attn: Alton Chavis)
Langley AFB, VA, 23665

Dear Mr. Chavis:

Enclosed are copies of two letters, one addressed to Captain Nelson Brown (dated 6 October 1979), the original of which was returned unopened and marked 'undeliverable', and the other (dated 30 October 1983) addressed to General Creech.

May I be assured that these letters will appear in the report on the Reserve MOA and that a copy of the report will be furnished to me at PO Box 843, Reserve, NM, 87830?

Sincerely,

R. Arnold

Rhodes Arnold,
Lt. Colonel, Retired

6 October 79

Captain Nelson Brown
Office of Information
Holloman AFB, NM, 88330

Dear Captain Brown:

To assure the reader that my motive in writing this letter is not anti-defense, let me point out that I was raised in the regular Army (my father is a retired Colonel of Infantry) and a great part of my adult life has been spent in the Army, the New Mexico Air National Guard, the Air Force, and the Air Reserve, enlistment having occured on 17 December 1941. On 5 January 1979, at the age of 60, I retired from the Air Force Reserve as a Lt. Colonel, and firmed up my plans to settle in the small, serene, quiet, peaceful community of Glenwood, New Mexico. This past April I rented PO Box 282 at the Glenwood Post Office and in June I registered my automobile and trailer at the State office in Reserve. Ihave made arrangements to purchase an acre of land on the northeast side of Glenwood. Obviously I have a great interest in what happens in the part of New Mexico.

Luckily I learned from the friend from whom I am purchasing the land that a meeting was to be held in Reserve on 2 October, relative to the Air Force plan to destroy the serenity of that most beautiful part of New Mexico. Destroy may seem a little strong to some, but to those of us who have experienced the sonic booms generated over the Gila Bend Gunnery Range and carried the 60 or 80 miles to Tucson by 'freak' atmospheric conditions, destroy is most appropriate.

The many individuals who presented arguments against the Air Force MOA plan, and in particluar Mr. Rothman, expressed my sentiments very well, but few of those individuals have had Air Force experience comparable to mine, and therefore have little practical knowledge of the workings of the Air Force.

As an Air Force officer, I was appalled at the use of the very small courtroom for the hearing when the High School Gymnasium would have been more appropriate. Is this an example of Air Force planning? I was disgusted to learn that the Air Force had not seen fit to mail a copy of the Draft Environmental Impact Statement to each postal patron in the affected area. As a matter of fact, many individuals believe that the Air Force purposely tried to keep the situation as low key as possible. Is this another example of Air Force planning? Certainly the Post Office Departmemt could have provided a fairly accurate figure and certainly the printing facility at Holloman (or some other Air Force facility)could have printed sufficient copies at minimal expense. Is this lack of planning an indication of Air Force arrogance toward the citizens of this area?

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As an Air Force officer I have seen a great deal of Air Force 'planning' over the years and, frankly, I have little pride in much of that effort. I have also been a witness to the long standing attitude of Regular officers (of all services) toward the citizenry. An attitude of 'them and us' has long permeated the conversations of military personnel, their thinking, and their actions toward citizens. As a citizen soldier I can only describe this attitude as arrogance. Yes, we do need national defense, and we do appreciate the efforts of our Defense team, but we would appreciate a little more consideration on the part of the team; they must be educated to the fact that they work for us, that our country is a representative democracy, and that the people are sovereign!

To present to the citizens of Catron County the very limited alternatives mentioned in Capt. Brown's slide show is, to me, a glaring example of that arrogance. To suggest that these are the only viable alternatives is little short of criminal, and certainly does not reflect well on the ability of our Air Force minions to think and plan effectively, reasonably, and sensibly. There are many alternatives, one of which would be to conduct sub-sonic training between Holloman and a Gulf coast base; refuel (the cost of fuel must be cheaper on the coast than at Holloman) and conduct super-sonic training over the Gulf of Mexico where practically no one would be disturbed. Of course, it will be argued by the Air Force that expense precludes such an alternative; what about the emotional, environmental, economic, and other kinds of damage which will be suffered by the people, property, and animals of Catron County? Is there no expense involved on the citizen side of the issue? Let me say very strongly that the extra dollars involved in such an alternative plan are relatively few, in comparison with the 'human costs' which will be generated by the super-sonic flights over our quiet countryside. certainly our highly paid Air Force planners can find ways to minimize the dollar cost of such an alternative!

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If no other alternative can be found, then let us be democratic; let us all share, and share alike; let the people of Albuquerque, El Paso, Tucson, Amarillo, Phoenix, Holloman, Davis-Monthan, Luke, Williams, Fort Bliss, and all the other towns, bases, and villages of our nation share in the discomfort caused by these flights. Let us not destroy one beautiful area; we have too few such areas left in our nation.

May I suggest that continuing excesses on the part of the military can only alienate the citizens you are charged to protect; better planning could encourage continued support by those citizens.

Sincerely,

R. Arnold

Rhodes Arnold,
Educator

30 October 1983

General W. L. Creech
Commander, Tactical Air Command
Langley Air Force Base, Virginia

Dear General Creech,

To one long associated with the military, the spectacle at the Reserve School Gymnasium on 20 October, chaired by AF JAG Colonel Ratcliff, was certainly an embarrassment. To the citizens of Catron County it was quite an eye-opener. For the AF to be represented by an imperious, arrogant colonel was a very serious tactical error and did AF public relations little good. Apparently the colonel did not understand that he was a guest in the community, that he was addressing civilians, that he was speaking in a facility owned by the citizens of Catron County, and that he is a public servant. Were he an officer under my command he would now be wearing a pillow on his posterior.

Although Colonel Stamm and Major Graham seemed quite affable and cooperative, it was most obvious that they had had little to do with the drafting of the Environmental Impact Statement and that they had not properly prepared for a hearing of this sort. We were embarrassed for them.

Rest assured that my motive in writing this letter is not anti-defense. I was raised in the Regular Army (my father is a retired Colonel of Infantry) and a great part of my adult life has been spent in the Army, the New Mexico Air National Guard, the Air Force, and the Air Reserve. I enlisted on 17 December 1941, served as an air mechanic, a weather officer, a radar intelligence officer, and as a base supply officer, and retired from the Air Force Reserve on 5 January 1979, at the age of sixty.

In April of 1981 I purchased a half acre of land in Rancho Grande Estates, eight miles southwest of Reserve, and have built my own home on my very small 'ranch'. I moved here to get away from the noise, crime, confusion, and other problems of the city, and have looked forward to many quiet years of retirement engaged in writing works on Air Force and Naval aviation history. I had acquired a Post Office Box in Glenwood, New Mexico, in early 1979, and had registered my vehicles in New Mexico, preparatory to acquiring property in Catron County. In September of 1979, a retired AF friend called me from Glenwood and acquainted me with the DEIS which was to be aired at the Catron County Courthouse a few days later. I attended the hearing and was appalled to learn that the AF was planning to destroy the serenity of our beautiful part of New Mexico. Destroy may seem a little strong to some, but to those who have experienced the sonic booms

generated over the Gila Bend Gunnery Range and carried 60 or 80 miles to Tucson by 'freak' atmospheric conditions, destroy is most apt.

On 6 October 1979, per instructions given at the hearing, I addressed a letter to Captain Nelson Brown at Holloman AFB. Upon returning from an extended trip several months later, I found my letter had been returned as 'undeliverable'!

192 At the time of the 1979 hearing, and again in 1983, an obvious attempt on the part of the AF to minimize debate on the part of the Catron County citizens was the failure of responsible officials of the AF to provide each Catron County PO Box holder a copy of the DEIS. Certainly a few calls to postmasters in the areas to be affected could have produced an accurate accounting of the number of boxholders, and certainly the Holloman AFB Information Officer could have had copies of the DEIS printed at relatively little expense compared to the millions of dollars worth of fuel which will be consumed by aircraft flying to our little bit of heaven. 192

193 To present to the citizens of Catron County the very limited options mentioned by Capt. Brown and Major Graham, is to me a very glaring example of the arrogance of the military, which I have noticed so many times before. To suggest that these are the only viable alternatives is little short of criminal, and certainly does not reflect well on the ability of our Air Force minions to think and plan effectively, reasonably, and sensibly. There are many alternatives, one of which would be to conduct sub-sonic training between Holloman and a Gulf Coast base; then conduct super-sonic dogfighting training over the waters of the Gulf. No doubt the cost of fuel at a Gulf Coast facility would be a little cheaper. 193

Of course it will be argued by the Air Force that expense precludes such an alternative; but what about the emotional, environmental, economic, and other kinds of damage which will be suffered by the people, property, and animals of Catron County? Let me say very strongly that the extra dollars involved in such an alternative plan are relatively few when compared with the 'human costs' which will be generated by the super-sonic flights over our quiet countryside. Certainly our highly paid Air Force planners can find ways to minimize the dollar cost of such an alternative.

May I suggest that continuing excesses on the part of the military can only alienate the citizens you are charged to protect; better planning could encourage continued support by those citizens.

Sincerely,

Rhodes Arnold,
Lt. Colonel, Retired

(Copies to appropriate officials)

Post Office Box 188
Glenwood, New Mexico 88039
November 2, 1983

HQ TAC/DEEV
ATTN: Mr. Alton Chavis
Langley AFB, Virginia 23665

RE: Environmental Impact Statement
Supersonic Flight Operations in the Reserve
Military Operations Area

Sirs:

I am vigorously protesting the proposed variance for using the Reserve MOA for supersonic training exercises. The regulations prohibiting activities which will knowingly produce numerous sonic booms over an extended period of time were promulgated to protect people, animals, and the environment from various damages resulting from same. The variance should NOT be changed to allow such activity (i.e., supersonic training missions) in the Reserve MOA.

I regret that I do not have the time nor easy access to the literature which the U.S. Air Force has in such a careless and weak manner used to indicate in the EIS that little or no harm will result from some 300 supersonic sorties per month in the Reserve MOA. There are numerous inaccuracies and outright falsehoods in the statement. The entire presentation of the statement, which is supposed to show that adverse environmental impacts might result, is so vague that it is extremely difficult to follow.

It is my contention that the U.S. Air Force (I note that these individuals who were responsible for the writing of the EIS do not even have their names anywhere in the manuscript) has taken often obscure and very limited information from the scientific and other literature and attempted to use this to indicate that all is fine and dandy and no adverse effects will occur. Maybe they won't, but the entire EIS is unsatisfactory.

Several quick notes might help substantiate my claims:

194 Page ii - The information given regarding focus booms could also have indicated that any particular area (based on data presented) would have a probability of such a boom about once every ten months--much more informative than once in "about 3,300." 194

96ii Page ii--The figure of a focus boom adding "less than 0.01 decibels to the space/time average" is not telling it the way it is. True, the "average" may only be increased by a minute amount, but the intensity for the short duration of the boom is being deliberately underplayed. 195

Page ii-iii--Essentially you are stating that since "it is not known with any degree of certainty whether prolonged exposure results in

cumulative pathology," the citizens of Catron County will become Guinea pigs.

196 Page iii--I can speak from casual observation here in Glenwood that every time we receive a sonic boom (even not intensive ones) the pheasants take flight and emit their distress calls. What effect this might have on nesting species is not certain, but it will certainly leave eggs and/or nestlings at least temporarily open to predation and environmental stress. 196

Page iv--The information given which indicates that aircraft noise around airports does not appear to adversely effect wildlife populations is NOT dealing with sonic booms of the nature proposed for the Reserve MOA.

197 You simply cannot and do not justify your statement that "The potential for sonic boom impact on the local economy has been evaluated and determined not to be significant." I suggest that there might be a gradual and long-term delitereous effect on such prominent Catron County activities as hiking, camping, hunting and fishing--all of which pump needed dollars into an essentially depressed economy. 197

Page 1-4--"In an effort to mitigate the impact of sonic booms" is a clear statement by the Air Force that the sonic booms will have an impact!

198 Page 1-16--The flights, even subsonic, are a real intrusion for those seeking a wilderness experience. To pass this off with a few sentences is not being honest at all--the flights will(or at least some of them) have an adverse effect on people seeking a quality outdoor experience--whether within the Gila Wilderness or the adjoining countryside. 198

199 Page 2-2--You fail to really pay much attention to the New Mexico Department of Game and Fish statement. 199

Page 3-1--The data on pollutant emissions may not seem significant until it is pointed out that most of these increases are on the order of 300% of existing emissions!

200 Page 3-2--"Noise levels from subsonic flight would remain to be typical of a rural community." Simply NOT true. 200

201 Page 3-7--I do not believe that many of these population figures are correct. What was the source of information? What year? 201

202 Page 3-21--You have had four years since the last EIS for this area was put out. No new studies of significance on animals in natural ecosystems? 202

I could go on and on about innumerable poorly presented, unsubstantiated claims and use of bits of information from the literature which the U.S. Air Force has, in an intellectually dishonest way, used to support their claim

that virtually no deliterious effects, whether it be physical, mental, to people, animals, or the environment, will result from use of the Reserve MOA as a supersonic training area. How about adverse effects within the MOA but not beneath the principal training ellipse? Do you really expect us to believe that the pilots will be exerting genuine effort to stay within the designated area? What monitoring will take place? How about the great increase in subsonic noise which will occur in the Reserve MOA?

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A large portion of the EIS is descriptive material that in no way addresses "environmental impacts." The EIS may look impressive because of its bulk, but it is sadly wanting. The Reserve MOA should NOT be used for supersonic training. The U.S. Air Force has grossly failed in presenting its case--both in the EIS and, somewhat disturbingly, by those Air Force personnel who showed a paucity of knowledge at the meeting held in Reserve in October. If the supersonic training is imperative, we propose that it be carried on elsewhere and not in Catron County.

Very truly yours,

Richard C. Nelson

Post Office Box 188
Glenwood, New Mexico 88039
November 2, 1983

HQ TAC/DEEV
ATTN: Mr. Alton Chavis
Langley AFB, Virginia 23665

Sir:

SUBJECT: Supersonic Flight Operations in the Reserve Military Operations Area

204 If the impact of supersonic flight operations is as innocuous as the DEIS suggests, why is it so imperative that the activity take place over sparsely populated areas such as Catron County? If this is an activity vital to our national defense, it would be more democratic to rotate flight operations so that the impact is diffused and not focused directly on a small and relatively defenseless population. 204

205 Catron County is a depressed area. There is chronic unemployment as a result of few job opportunities. Other than ranching and mining, the county depends heavily on tourism. A decline in tourism would have a disastrous effect on many small, marginal businesses which could not survive on the income from sales to local residents alone. We need service stations and grocery stores; they cannot exist to serve us without the supplemental income provided by tourism. If the area is no longer a peaceful place for hunting, hiking, fishing and camping, tourists will go elsewhere and the small businesses we need will dry up. 205

Also, and perhaps most frustrating, the county has been subjected to repeated flooding in recent years. Resources that are desperately needed for repairs and preventive construction cannot be spared to take on our own government in an effort to stave off another major problem that we just didn't need. We are faced with problems here which require 100% of our human and financial resources if we are to deal with them effectively. And supersonic flight operations will not even offer the offsetting benefit of providing employment in the area or bringing in personnel who would put money into the economy.

Finally, if we have no choice but to be subjected to frequent sonic booms of a magnitude seldom inflicted on a population, there should be provisions for periodic evaluations of the county's mental, physical and financial health. We don't know what to expect, and neither--we suspect--does the Air Force. Are we not entitled to at least that much consideration?

Very truly yours

sharonnelson

Sharon Nelson

TECOLOTE PRESS, INC.
POST OFFICE BOX 188
106 WHITEWATER ROAD
GLENWOOD, NM 88039
(505) 539-2183

November 2, 1983

HQ TAC/DEEV
ATTN: Mr. Alton Chavis
Langley AFB, Virginia 23665

Sir:

SUBJECT: Supersonic Flight Operations in the Reserve Military Operations Area

We have written personal letters expressing our concern over proposed flight operations in our area. However, as the sole shareholders and officers of Tecolote Press, Inc., we have additional areas of concern. We do not know what effect a "focus boom" would have on our printing equipment. We have four computerized typesetting machines, sensitive darkroom equipment with numerous lenses and critical settings, a plate burner with a very delicate and expensive ultra-violet light source which cannot even be handled without special gloves, etc.

In the event that this equipment does sustain damage on one or more occasions, will the Air Force be quick and fair in settling claims?

Another consideration is our downtime if equipment is out of operation. Virtually all our orders are for dated printing which must ship on schedule. We specialize in 24- to 48-hour service to organizations with scheduled events. Because downtime would be so disastrous to us, we have gone to the expense of trying to have back-up equipment for almost every part of our operation, but if a sonic boom were to destroy the computer chips or light sources in more than one machine, we would be in serious trouble. We have gone to great lengths to build a reputation for reliability and, if it became necessary to relocate because of frequent (twice a year would be frequent in our business) downtime, the printing customers would already have had to find a more reliable supplier.

Are we correct in feeling that it would be "tough luck," or would the Air Force be of assistance? (Be assured, we have better things to do than submit claims for fictitious problems. We want to have the presses up and running; we want to operate our business in its present location; we want to spend our time in production, not wrangling with the Air Force.)

Would Tecolote Press and other small businesses in the county have recourse to the government; or would we be considered unfortunate but necessary casualties in the cause for national defense?

Very truly yours,

sharonnelson

Sharon Nelson
Vice President

SN

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September 20, 1983

Mr. Alton Chaviz
Langley AFB
Hq. TAC/DEN EIS
Virginia 20625

Dear Mr. Chaviz,

I have reviewed the draft Environmental Impact Study proposed supersonic flights over Catron County, New Mexico. I am very much opposed to this possibility.

What concerns me is Dr. Worthingtons detailed analysis of documents regarding the effects of sonic booms on people. There is not enough evidence available to support this data. Furthermore, even if all the scientific knowledge available proved to be in support of sonic booms and their "non-detrimental" effect on humans, I would firmly and vehemently oppose all proposed flights.

In my opinion, this is an invasion into my lifestyle; a way of life I chose in order to get away from imposed aggravation and distress that I had some control over, ie. noise, pollution, people. I live here for this reason. In this respect, I shall be negatively affected by the Airforce imposing sonic booms upon my life. My quality of life will be endangered. Unfortunately, I feel that I will have no control over this happening unless I move.

I write this letter to you, knowing in advance, that the people of Catron County will lose this battle to a series of Air Force and Environmental Protection Agency studies supporting Dr. Worthingtons report. These studies will only postpone the inevitable. But, for the record, I would like it to be known through this letter and the copies that will be sent to my Congressmen and Senators that they who support this matter will not be reelected with the help of votes from this county--however insignificant the number may mean to their reelections. It will, nonetheless, show our hopelessness of ever overcoming opposition through our politicians over any institution as large and as powerful as the United States Airforce.

Sincerely,

Marie Mullen

SEPT. 3,1983

MRS. VIOKA M. PAUL
P.O. BOX 245
GLENWOOD N.M.
88039

HEADQUARTERS TACTICAL AIR COMMAND DEEV,
LANGLEY AFB, VA. 23665

SUBJECT

PROPOSED SUPERSONIC FLIGHTS OVER THE RESERVE MILITARY OPERATIOS AREA.

DEAR SIR:

207 I AM VERY MUCH AGAINST THESE FLIGHTS. I WOJLD SUGGEST THAT YOU AGREE TO A 30 DAY TRIAL. LET PEOPLE EXPERIENCE A FEW SONIC BOOMS. IF IT IS AS HARMLESS AS YOU IMPLY,,YOU WILL HAVE NOTHING TO LOSE. 207

YOURS SINCERELY

Vioka M. Paul

Ford motel
Herman Johnson
P.O. Box 86
Glenwood Mn.
Zip 88039

Headquarters Tactical Air Command
DEEY

Dear Commander:—

The air force plans to shock southeastern Catron County with daily supersonic booms, some of which, they admit, will be loud enough to break windows.

They ignore medical studies that indicate human health will be endangered, and they claim that at most only about 100 persons in the county will be "highly annoyed".

We know this is white-wash — Please protect our homes & our health.

Sincerely
H.L. Johnson

October 31, 1983

Dear Sir:

I would like to bring to your attention the plight of Catron County. The Air Force is violating our most fundamental rights to our land and to our lives. I, as a citizen of Catron County want to raise my voice in protest against the Air Force Super Sonic operations over a large segment of Catron County.

We depend upon the laws of our land to protect us even from the Government itself. The 14th amendment states that no person will be denied equal protection of the laws.

208 There have been several errors in the E.I.S. statement. In the report and maps the Air Force have supplied to the citizens of the area, they have greatly underestimated the population of Catron County. 208

209 Economic factors must be taken into consideration. Catron County's economy is dependent on Tourism. Ranchers have expressed concern about the effects of the sonic boom on cattle. There is also a possibility that it could effect wildlife. 209

210 There are some medical reasons such as, stress and early physical impairment that could be harmful to citizens of Catron County. Not only can there be medical problems but extensive damage done to property. 210

There is a basic distrust of Air Force statements and intentions. We have no written guarantees that the Air Force will stay in its guidelines and not gain greater control.

Catron County is my home, and I want it to remain a peaceful community: not to be threatened by repeated nerve-shattering booms.

Please consider this letter and give it serious thought.

Sincerely yours,

The Following Open Letter is submitted To the Air Force For Publication in its Final Environmental Impact Statement, by

November 1, 1983

Steve & Wendy Haury
P.O. Box 74
Glenwood, New Mexico
88039

AN Open Letter regarding the AIR FORCE Proposal To establish a low-altitude super sonic Training area over and around RESERVE.

My wife and I have only recently moved To Glenwood from Socorro. Even before settling here in Glenwood we valued the natural beauty and peace we found in the scattered Towns and wilderness of Catron County. We spent many weekends in this area and appreciate the unique forrested beauty and Temperate climate of the Gila Wilderness. This is one of the pristine spots of Southern New Mexico which is enjoyed by hikers, fisherman, and hunters from all over the South-West and, indeed, from throughout the country. We feel privilaged To live amongst This natural beauty and To enjoy the company of the many others in our community who feel as we do about this Land. It is with this high regard for our environment that we approach the Air Force and its proposal To patriotically destroy the peace and economy of this area without an honest appraisal of the alternatives.

The intention of our Air Force as layed out on paper in the Environmental Impact Analysis is To staye their super sonic dog fights in air space which abutts one of the earliest wilderness areas set aside by the United States Government, the Gila National Forest and Aldo Leopold wilderness preserve. While those neat boundaries may hold True on paper in all honesty we cannot expect

our young pilots training at speeds exceeding that of sound to remember those fine distinctions while executing complex evasive manuevers. In fact these pilots cannot respect such gentelmen's rules within these narrow boundaries. Today's military technology requires more room for error to avoid destructive mistakes which a simple lapse of judgement in a moment can create. Besides, Gentelmen's rules such as these went out with the crusades.

Our Air Force does intend to hold their low altitude supersonic exercises over the rangelands beside our National Forest. Beef cattle form the agricultural backbone of this county and by restricting their desruptive manuevers over the thousands of acres grazed by range cattle the Air Force is doing us no favor. The rancher has a hard job as it is without having to repeatedly chase down cattle widely scattered by recurring and intense sonic booms. Unavoidable also is the health risk to all on horse back below these supersonic dog fights. The rancher must not only contend with tracking down stray cows but must also be subjected to a horse which bolts at the explosive and unannounced arrivals of sonic shock waves.

Unavoidable also is the effect these exercises by the F-15s will have on the residents of the area. This diverse group of citizens are united in their choice of a peaceful and natural place

To Live. their peace will be utterly lost if the Air Force is to have its way. Furthermore the stress caused by repeated arrivals of sonic shock waves will be far greater than that experienced by city dwellers beside the constant noise of busy streets. So the unfortunate landowners of Catron County will in effect be performing the service of laboratory rats in the future study of prolonged exposure of humans to low-altitude sonic booms.

212

What this all adds up to, and what the Air Force has proposed, is the economic stagnation of Catron County. Hard pressed as it is this county cannot withstand easily a further loss in income which would follow a drop in tourism, agricultural revenues, and land values. But this would be the natural result of the Air Force's heavy use of the area for its disruptive exercises. Add to these costs the inevitable and indeterminate cost in long term health care and property damage and I think all would agree this burden too great. The people agree, the Air Force Training should take place closer to home at the White Sands Missile Range or other less populated locale rather than condemn Catron County residents to the poverty of a third world country.

212

Sincerly, Steve Hanny
Wendy Schlumann-Hanny

From Steve Fleury
P.O Box 71
Glenwood, New Mexico
88039

To, Senator Jeff Bingaman
502 HART SENATE OFFICE BUILDING
WASHINGTON D.C. 20510

Dear Sir, October 31, 1983

This letter is in reguards The Air Force's proposed low-level super sonic flight Training over the Reserve area in CATRON county New Mexico.

With this letter I would like To register with you my amazed displeasure with The Air Force's persistent and devious attempts To carry out its ill-planned super-sonic activities here. I have but recently moved here from Socorro, New Mexico, and am only now really aware of what's being proposed for this unique and beautiful area of Southern New Mexico.

On paper The air-space which The Air Force wishes To utilize for low-level super sonic dog-fights abutts the Gila National Forest. Up To 11 Now This has been one of the best and longest protected wilderness sites in the country. In reality the super-sonic Training flights would certainly stray The few miles it will take to overfly this now peaceful wilderness. the result is UNANNOUNCED explosions from these jet fighters Traveling at mach 1 To 1.5 at a mere mile To mile and a half above the meadows and streams of The Gila forest and Wilderness preserve. Surely you will agree That the peace and wildlife, the essence of this wilderness which this country has set aside To preserve, will be soon lost.

Also lost To the Ranchers of Reserve and a large

part of Catron County will be the peace-of-mind in knowing where your range cattle are. Much of the land here is only suitable as range land, and one Ranchers cattle may graze thousands of acres. The headaches of having these cattle scattered repeatedly you can imagine. These Ranchers will also be exposed to the constant hazard of having their horses bolt at the intense noise of the sudden and unannounced low-level sonic booms. Any inexperienced riders will be warned not to ride under these conditions.

Finally there are the residents of the several Towns in the area. These are a significant number of voteing citizens from all age-groups and life-styles. The one uniting factor of them all is the choice of this quiet and peaceful area in which to live. Their peace will be lost in a way much more stressful than those who live by the constant noise of city streets experience. The sudden -intense and unannounced explosions of low-level sonic booms. There is NO guarentee that the number of these devastating explosions can be controlled once the Air Force's proposal is accepted!

What I have not mentioned is the economic effects of all this on the already hard-pressed economy of Catron County. You can simply walk one step further with logic and see the loss of Tourism, agriculture, land values and even property damage all directly following the heavy-use of the Reserve area by the Air Force for its low-level super sonic

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I am sure you realize that this low-level supersonic flying over populated or National Wilderness areas has not happened before, The Air Force must have a special waiver to fly so low - down to 1 or 1.5 miles above these hills. The subsequent booms will be much louder than high-level sonic booms which we have experienced before.

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The added costs to the Air Force itself will be substancial. The extra time required to fly to the Reserve area from their base adjacent to the White Sands Missile Range will be added dollars in fuel and maintence on these very expensive aircraft. How can those needless hours of flight time be justified when other possibilities lay close at hand?

216

In closing let me add that if this wish of the Air Force is allowed reality it will condemn Northern Catron County to economic stagnation and will cost the South West one of its best recreation sites. Why is not the Air Force forced to buy-out a less populated and valuable piece of real-estate for their use? Because they have the power to resist, there can be no other justification but power. You, Senator Bingaman, are the power of the people for whom, I ask, you put up a good fight.

Thank you for your time and consideration.

Sincerly, Steve Hanny

DATIL SCHOOL
DATIL, NEW MEXICO

QUEMADO SCHOOL
QUEMADO, NEW MEXICO

Independent School District No. 2
CATRON COUNTY
OFFICE OF SUPERINTENDENT—PHONE NO. 773-4445
P. O. BOX 128
QUEMADO, NEW MEXICO, 87829

Dear Senator Jeff Bingaman.

As a student of Quemado High School
I appose the usage of this area by
the Air Force Training mission

My reason for my appose are:
1) To much noise over these homes around Quemado specially when they can use the White Sands Missle Range. 217 217
2) It would disturb wildlife game, and the ranchers cattle. 218 218

Signed
Students of
Quemado High

31 October 1983

The Honorable Jeff Bingaman
502 Hart Senate Office Building
Washington, D. C. 20510

Dear Senator Bingaman:

It is a sad comment on our Air Force that after an interval of four years it has been unable to produce an Environmental Impact Statement any better than the current one concerning the proposed supersonic flight area in Catron County. The public hearing held in Reserve, New Mexico, on 20 October brought to light many deficiencies in this document, among them the following:

1. The effect of sonic booms on human health is imperfectly addressed, leaving open this vital question;

2. The damaging effect of sonic booms on property and the economy is of great interest to us; this document and verbal responses by Air Force personnel at the hearing failed to answer our questions;

3. The EIS and Air Force personnel were not at all clear as to the limits of the area where sonic booms would be heard, or the numbers of people even marginally impacted; and after four years they still don't seem to know the approximate number of people living in the area!

It became apparent, from statements made, that there is an effort by the Navy and the Air Force to obtain a number of supersonic flight locations over populated areas. Such flights are now being made over the Papago Reservation in Arizona, are proposed for the Reserve area in New Mexico, for the Valentine area in Texas, for the fringes of eastern Nevada and western Utah, by the Air Force; in central Nevada by the Navy. The question of whether or not to allow human populations to be bombarded by sonic booms is a national one, and should be so addressed, The attempt by individual Air Force Wings to overturn the national concensus of the 1960s developed in response to the proposal for a supersonic transport aircraft cannot be allowed. If we wish to re-examine that decision, let it be done on a nation-wide basis.

Sincerely,

Daniel M. McKnight

Barbara C. McKnight

Post Office Box 246
Glenwood, New Mexico
88039

12 August 1983

The Honorable Jeff Bingaman
United States Senate
Washington, D. C. 20510

Dear Senator Bingaman:

Thank you for your thoughtful response to our letter relative to our national defense. The articles you included were of great interest to us, and of course we were pleased to read your speech reflecting many of our own opinions. And there appears to be some hope that changes may be made in weapons testing.

Currently we are concerned with the Air Force plan to fly supersonic training flights in the Reserve Military Operations Area. We have received and gone over the Revised Draft Environmental Impact Statement. No matter what effect sonic booms may have on the environment, they are without question going to disturb people. These operations, if approved, will destroy one of Catron County's finest attributes: its QUIET. We are strongly opposed to the proposal, and for your information are enclosing a copy of our comment.

Sincerely,

Daniel M. McKnight
Barbara C. McKnight

Post Office Box 246
Glenwood, New Mexico 88039

12 August 1983

Headquarters Tactical Air Command/DEEV
Langley AFB, Virginia 23665

SUBJECT: Comment on Revised Draft EIS on proposed supersonic flights over Reserve MOA

The statement of Richard D. Worthington, Ph.D., together with critique and rebuttal, appearing in the EIS as Appendix E, we consider to be the most telling point against conducting the proposed supersonic flights anywhere over the continental United States. We quote from his statement:

> "In view of the current knowledge of the adverse effects of loud sounds on health it is morally and ethically wrong for a governmental agency knowingly to subject a human population to this form of increased stress."

Some years ago our government ruled against allowing the SST to overfly the United States population, and we do not understand how the Air Force can now be allowed to override that decision.

222 Nowhere in your EIS do you show any concern for the feelings of the individuals being subjected to the effects of your proposed operation. Instead you hide behind statistical terms like CDNL. We are concerned about us, and the effect not only of sonic booms but of increased noise of air traffic over our area where now almost none exists. 222

We strongly protest this invasion of our privacy.

Daniel M. McKnight

Barbara Clark McKnight

Daniel M. McKnight
Barbara Clark McKnight
Post Office Box 246
Glenwood, New Mexico 88039

15 October 1983

The Honorable Jeff Bingaman
United States Senate
Washington, D. C. 20510

Dear Senator Bingaman:

Your response of September 28, 1983, to our letter about the proposed sonic boom project over Catron County sounded strangely like the one we received four years ago from your predecessor, Harrison Schmitt. Does serving on the Senate Armed Services Committee tend to bias you in favor of the Air Force? We have appealed to our duly elected representatives to protect us from an infringement of a constitutional right: taking away something -- the quality of life -- without due compensation.

We feel that there are serious questions raised by the Air Force in their various Environmental Impact Statements, and we want to be sure that our objections are seriously considered. We hope you will take time to be briefed on both sides of this question.

Sincerely,

Daniel M. McKnight Barbara C. McKnight

Daniel M. McKnight Barbara C. McKnight
Post Office Box 246
Glenwood, New Mexico
88039

Rt. 10 Box 462
Glenwood, NM 88039
October 28, 1983

HQ TAC/DEEV
Attn: Mr. Alton Chavis
Langley AFB, Virginia 23665

Dear Alton:

This regards the Revised DEIS for Reserve MOA New Mexico. I hope the request is denied for a waiver from the 30,000 foot level minimum for supersonic flight.

223

The Air Force chose Holloman AFB out of 90 bases to beddown the 479 TTW. This was a very costly mistake. Over and over this is the major excuse for being unable to use the desert plains near Holloman AFB for the 49 TFW. If the 479 TTW was relocated then several MOAs would be available close to Holloman AFB and would offer a long term savings in fuel and flight time over the present proposal to fly 150 miles to the Reserve MOA. Does a sortie at White Sands Missile Range (WSMR) include more time dogfighting since less time is needed to travel to and from the area? WSMR is already a supersonic area and this is the place to look for more efficient time sharing, such as flying weekends and doing maintenance during the week. Low altitude supersonic areas should be confined to restricted areas to prevent abusing citizens.

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Must the portion of the sortie using radar to close onto a target be included in all 1200 sorties per month? The dogfight portion of the sortie can be confined to a small ellipse 12-18 miles. Pecos, Beak, Talon & McGregor MOAs can all contain such an ellipse. The alternatives have not been adequately examined. I call for a revised DEIS that addresses these issues in detail.

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Thank you for this opportunity to comment.

Sincerely,

Robert Owen Lorentzen Tonya Lorentzen

Robert Owen Lorentzen
Tonya Lorentzen

1-202

Star Rt. 10 Box 462
Glenwood, New Mexico 88039
September 28, 1983

Headquarters
Tactical Air Command IDEEV
Langley AFB, Virginia 23665

Dear Sir:

My husband and I are very concerned about the proposed sonic booming to our Catron County. We moved here for the peace and solitude of this area. We have invested in 51 acres of land. Land sells for over $5,000 an acre. If the air force does this low altitude sonic booms the land will be devalvated and people will loose their investments. 225

Our altitude in Glenwood is 4,6000' and Reserve is a higher elevation. We hike in the nearby mountains where the mountains are 9,000' and 10,000'. The proposed altitude for these sonic boom is 15,000' above sea level, which will definitely be heard. Plus the speed with which these pilots fly, will they fly lower especially while dogfighting? 226

There are many senior citizens and young children living here. The proposed booming will affect their health with stress and heart problems. The nearest hospital is 65 miles away. 227

This area is definitely one of New Mexico's best for scenery and wildlife. It is fragile. There are rugged, steep mountains with deep canyons. The sonic booms may cause avalanches on the people at the Catwalk National Historical Trail. 228

The sources of income here deals with cattle raising and tourism. The startling sonic booms will have an alarming affect on them.

Please help us and don't allow the air force to fly low altitude sonic booms in Catron County. Why can't the sonic booms be done elsewhere over White Sands Missile Range, Pecos, Valentine, the ocean or the Gulf of Mexico. We really don't think that people should have to tolerate such noise pollution especially of such magnitude. We will appreciate your assistance.

Sincerely yours,

Tonya Lorentzen

Tonya Lorentzen

Robert Owen Lorentzen

CA Letter # _____ Doc # 19439

Profile (See Code Book)

P.O.Box 278, Glenwood, NM 88039
August 20, 1983

Congressman Bill Richardson
U.S.House of Representatives
Washington, DC 20515

PROPOSED SUPERSONIC FLIGHTS OVER THE RESERVE MILITARY OPERATIONS AREA

Dear Mr. Richardson:

Residents of Glenwood and Reserve have received copies of the Air Force's "Revised Draft, Environmental Impact Statement, Supersonic Flight Operations in the Reserve Military Operations Area, Holloman AFB, New Mexico" dated July, 1983. We assume that you received a copy too.

229 In the autumn of 1979 the Air Force issued a "First Draft" describing the proposed operations. The people of Glenwood and Reserve were appalled at the prospect of turning this peaceful and beautiful region into a nerve-shattering battleground for dog-fighting F-15 jet planes. They were frightened at the realization that their homes and businesses, usually representing their life savings, would lose much of their market value. They were furious that their childrens' health and grades in school could be jeopardized by the "startle effect" of the booms, which research on loud noises has shown is something human nervous systems cannotget used to when loud enough to break windows, which the Air Force admits will happen. 229

Public protest was so intense and fierce that the Air Force retreated and spent the next four years carefully designing the present bulky document to, if possible, nullify previous objections and offer soothing reassurances.

This letter is principally to alert you to a developing situation that may reach a boiling point in the near future. I will not point out here in detail the numerous attempts in the present Air Force draft to minimize, turn aside or ignore criticism of its proposal as well as to soothe and reassure through unsubstantiated, incredible claims that only six people in the Reserve MOA will, at worst, be "Highly annoyed".

No doubt you will before long receive detailed analyses of the report from various qualified and concerned persons, and I will present the conclusions of the Glenwood Community Recreation Center Board in a follow-up communication. Suffice it to say that we feel victimized, steamrollered and threatened by a powerful and well-financed bureaucracy which considers it easier and more face-saving to push through without change a questionable and needless proposal rather than to reconsider and change it to conform to reality and fairness.

A former U.S. Under-secretary of State points out that policies and programs become the vested interests of the bureaucracy that pursues them. Its reaction to criticism is not to reconsider the policy but to defend it and show how no other alternative is viable. The opposition can be labelled selfish or even unpatriotic, and in the present case fears can be introduced that our boys will not be adequately trained.

The Air Force tries to show that the Reserve MOA must accept an indispensable share of the total flight training load -- but in the end concedes that the Valentine MOA in Texas could handle the Reserve share of the training along with its own share if necessary. What the Air Force overlooks is the Reserve MOA's unique National Park type of environment which the Valentine MOA does not have -- and the U.S. National Parks have been declared off-limits for sonic booms. The Air Force should be concerned with protecting these unique characteristics and related human use, not destroying them. 230 230

Please, Mr. Richardson, do protect us from this threat which will bring no benefits whatever to New Mexico and will destroy our way of life!

Sincerely,

Lowell Summer, Chairman
Community Recreation Board

P.O.Box 278, Glenwood, NM 88039
August 15, 1983

Senator ff Bingaman
U.S.Senate
Washington, DC 20510

PROPOSED SUPERSONIC FLIGHTS OVER
THE RESERVE MILITARY OPERATIONS AREA

Dear Senator Bingaman:

Residents of Glenwood and Reserve have just received copies of the Air Force's "Revised Draft, Environmental Impact Statement, Supersonic Flight Operations in the Reserve Military Operations Area, Hollomon AFB, New Mexico" dated July, 1983. We assume that you have received a copy too.

In the autumn of 1979 the Air Force issued a "First Draft" describing the proposed operations. Residents of Glenwood and Reserve were appalled at the prospect of turning this peaceful and beautiful region into a nerve-shattering battle ground for dog-fighting F-15 jet planes. They were frightened at the realization that their homes and businesses, usually representing their life savings, would lose a large proportion of their market value. They were furious that their children's health and grades in school could be jeopardized by the "startle effect" of the booms, which research on loud noises has shown is something human nervous systems cannot get used to when loud enough to break windows, which the Air Force admits will happen.

Public protest was so intense and fierce that the Air Force had to retreat and spend the next four years carefully designing the present bulky document to, if possible, nullify previous objections and offer soothing reassurance.

This letter is principally to alert you to a developing situation that may reach a boiling point in the near future. I will not point out here in detail the numerous attempts in the present Air Force draft to minimize, deprecate, turn aside or ignore criticism of its proposal, as well as to soothe and reassure through unsubstantiated, incredible claims to the effect that only six people in the Reserve MOA will, at worst, be "highly annoyed".

No doubt you will before long receive detailed analyses of the report from various qualified and concerned persons, and I will present the conclusions of the Glenwood Community Recreation Center Board in a follow-up communication. Suffice it to say that we feel victimized, steamrollered and unfairly treated and threatened by a powerful and well financed bureaucracy which considers it easier and more face-saving to push through without change a questionable and needless proposal rather than to reconsider and change it to conform to reality and fairness.

A former U.S. Under-Secretary of State points out that policies and programs become the vested interests of the bureaucracy that pursues them. Its reaction to criticism is not to reconsider the policy but to defend it and show how no other alternative is viable. The opposition can be labelled selfish or even unpatriotic, and in the present case fears can be introduced that our boys will not be adequately trained.

The Air Force tries to show that the Reserve MOA must accept an indispensable share of the total flight training load -- but in the end concedes that the Valentine MOA in Texas could handle the Reserve share of the training along with its own share if necessary. What the Air Force overlooks is that the Valentine MOA does not have the unique National Park type of characteristics and human use that the Reserve MOA has. The Air Force should be concerned with protecting these unique characteristics and related human uses, not destroying them.

Please, Senator Bingaman, don't let the Air Force take away, through their expensive white-wash report, our life savings and way of life just as a convenience for them when, as various qualified individuals will show in analyses soon to be sent to you, such drastic action will bring no benefits whatever to New Mexico and in reality is unnecessary.

Please help us !

Sincerely, Lowell Sumner

Lowell Sumner, Chairman
Glenwood Community Recreation Center Board

(Similar information to Senator Domenici and Congressman Richardson)

cc: Catron County Commissioners
Mr. Larry Tackman
Mr. and Mrs. Cecil Howard
Mr. and Mrs. Lloyd Eubanks
Mr. and Mrs. Dan Campbell
Mr. and Mrs. Joe Faust
Mr. and Mrs. John Faust
Mr. and Mrs. Fred Bowlden
Tecolote Press
Mr. and Mrs. Ben Thompson
Mr. and Mrs. Robert L. Thompson
Mr. and Mrs. Leonard Leth
Mr. and Mrs. Leon Pogue
Mrs. Emmett Paul
Mr. and Mrs. W.G.Askew
Mr. and Mrs. Howard Hutchinson
Mr. William Koethke
Mrs. Elfriede Mueller
Holliman Realty
Mr. and Mrs. J.R.Alsip
Mr. and Mrs. Duane Frost
Mr. and Mrs. Leonard Hudson
Mr. and Mrs. Richard Chamberlin
Mr. and Mrs. Cecil Beard
Mr. Jim Shelton
Mr. and Mrs. Kenneth Holliman
Mr. and Mrs. Jimmy Lyon
Mr. and Mrs. Arthur Tackman
Mr. and Mrs. Newell A. Welker
Mr. Aaron Manelos
Mr. and Mrs. Tom Klunker
Mr. and Mrs. Willard Farness
Mrs. Elva Estes and Belva Bradd
Ford Motel
Gold Nugget Gift Shop
L & S Enterprises
Mr. and Mrs. Harry Lorentzen
Mr. and Mrs Owen Lorentzen
Whitewater Store and Trailer Park
Mr. and Mrs. Steven Rothman
Mr. and Mrs. Roger Skaggs
Whitewater Motel & Restaurant

P.O.Box 278, Glenwood, NM 88039
October 29, 1983

Headquarters Tactical Air Command/DEEV
Langley AFB, VA 23665

Dear Sir:

Webster's Dictionary defines:

(1) Patriotism as "Love of country; Devotion to the welfare of one's country"

(2) Honesty as "Quality or state of being honest;Integrity; Truthfulness; Freedom from fraud"

I am a retired government employee. I love my country and have a deep feeling of devotion for America. However I doubtthe patriotism of the Air Force when it would destroy and lay waste to one of the most beautiful areas in the West, or in the U.S.A.

It is evident that you don't care about: the first Wilderness in America; economic impact(ranching, tourism and land values);that young people have moved here to raise their families; and the retired people who have spent their life savings to live the rest of their lives in a beautiful, quiet place.

231 Oh yes!You didn't address the health hazards of living in an area where there will be twelve of these supersonic booms a day. We know and have seen and researched the effects of these supersonic booms. No thank you. Would you like to have this happening over your homes -- your parents homes? Let's all share in this patriotism -- not just Catron County, New Mexico. 25

My second definition was "Honesty", so I would like to share some thoughts about integrity and truthfulness.The Air Force spent $150,000.00 publishing the the present DEIS for the Reserve area. The first half of this 300 to 325 page document was supposed to be the Air Force justification for this supersonic mission, followed by a rebuttal of the testimony given by Reserve residents at the 1979 public hearings, which testimony takes up the second half of the present DEIS -- an attempted rebuttal, that is.

232 The first half of this $150,000.00 (tax payers' money -- some of my money) document is so full of untruths and misleading statements that it is a farce. It doesn't address itself to:

1. Health hazards
2. Property values
3. Effects on ranching
4. Tourism (this is a recreational area -- hunting, fishing and hiking in National Forest and National Wilderness lands)
5. Reasons why the proposal cannot be performed over some of the 17 percent of New Mexico that has already been taken over by the Defence Department
6. Reasons why you don't want to spread this program around over your home towns and the rest of the country

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So much for the first half of your document. The second half, recording how we all felt in 1979, is still valid.

Let's all be patriotic and honest!

Sincerely,

Mrs. Marietta M. Sumner

August 27, 1983
Glenwood, N.M. 88039

Senator Jeff Bingaman
Senate Office Building
Washington, D.C. 20510

Dear Senator Bingaman:

We are glad you are from Silver City so you can appreciate the problems we may have here in Catron County.

The Air Force are planning super sonic flights over this beautiful part of New Mexico. This is primarily a recreational and ranching area (as you know). The economics of this area will be ruined if this is allowed to happen. They plan to have daily "day light" over the Wilderness and ranches and peoples property - breaking windows and cracking walls & other damage. There are other areas they can use - including the Valentine, Texas area.

The Second Draft of the Environmental Impact Statement which the Air Force has just sent out - is so full of fallacies and untruths - we are appalled that they would expect anyone to believe a lot of it.

Hope you can come & get out & see and enjoy New Mexico - during your recess.

You can look into this Air Force proposal and please help us. It really would be appreciated.

Sincerely
Mariette M. Summer
P.O. Box 278
Glenwood, N. Mex 88039

Glenwood, N. Mex. 88039
August 27, 1983

CA Letter # _____ Doc # 20579
(See Code Book)
1 _____
1 _____

Congressman Bill Richardson
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Richardson:

We desperately need ~~1ST~~ MC Your Understanding 2ND 3RD and Help.

The Air Force is planning daily Super Sonic "Dog-Fights" over our area here in Catron County. This is primarily a ranching (they will really be hurt with this activity) recreational and retirement area (because of the fine climate) This Air Force activity would be devastating to the economy - be in fact destroying a beautiful section of N. Mex. There are other areas where this training could take place - including the Valentine Texas area.

The "Second Draft of the Environmental Impact Statement" which the Air Force has just released is so full of fallacies and half truths We are appalled that they believe that people could believe a lot of the stuff they have printed in that report.

We hope You can help us - Please!

Sincerely Yours,
Marie Ida M. Sumner
P.O. Box 278
Glenwood, N. Mex 88039

COPPER CREEK SYSTEMS

P.O. Box 218 ● One Copper Creek Road
Glenwood, New Mexico 88039

STEVEN I. ROTHMAN
President

CUSTOMER SERVICE
(505) 539-2393

October 15, 1983

The Honorable Jeff Bingaman
Room 9017
Dennis Chavez Federal Building
500 Gold S.W.
Albuquerque, New Mexico 87102

Dear Senator Bingaman,

I was disturbed by your letter in response to mine concerning F-15 dogfights proposed over the Reserve, NOH. May I mention to you that 4 years ago former Senator Schmidt sent letters of a similar nature to me and other members of my community who wrote him, and he is no longer in office?

It is important for me to feel that you understand the serious nature of this problem affecting the largest county in New Mexico. These F-15 dogfights should not be done over people if there is another place that is not over people — and there is. If the Air Force proposed to sneak up behind every member of our community and shoot a gun into the air behind them, would you approve of this in the name of the defense of our country? The Air Force and the members of Catron County are both working toward the same goal — to preserve our country. I am sure the F-15 pilots would enjoy the flying much less if they felt they were endangering American lives below them — it may affect the effectiveness of their training. But —

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most important - you must realize that if these dogfights are held over us, we will all be exposed to an accident-threatening, health-threatening situation which you can prevent. We need you. You need us. Please help avoid a situation that will be good for none of us.

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Thank you for reading and for your help.

Sincerely,
Barbara Rothman

1983 OCT 21 AM 11:03

COPPER CREEK SYSTEMS

P.O. Box 216 ● One Copper Creek Road
Glenwood, New Mexico 88039

STEVEN I. ROTHMAN
President

CUSTOMER SERVICE
(505) 539-2393

October 13, 1983

U.S Senator Jeff Bingaman
502 Hart Senate Office Building
Washington, D.C 20510

Dear Senator Bingaman,

Would it be possible for you to propose a bill in the Senate to ban F-15 dogfights over people due to the intensely loud and startling "super-booms" that will be produced? These super-booms are potentially dangerous to life and buildings existing below, and the Air Force Impact Statement does not describe this problem accurately at all, although the Air Force is preparing to fly these missions over my community (Catron County). 235 235

If you need any technical assistance, my husband Steve has been staying up all night studying all the reports and published matter he can on sonic (SUPER) booms caused by F-15's, Air Force regulations, experience of the Papago Indians who were exposed to booms, and other related topics. Please call above number or write.

Thank you for helping to postpone the Sonic Boom Hearing from September to October 20 — we need the time.

Sincerely,
Barbara Rothman

[illegible]
[illegible]
[illegible]
88039

September 12, 1983

Honorable U.S. Senator Jeff Bingaman
502 Hart Senate Office Building
Washington, D.C. 20510

Dear Senator Bingaman:

I am writing to express my feeling of desperation over the proposed sonic boom explosions that will occur over my home if the Air Force is allowed to use our airspace for flight practice of F15 dogfights.

This has already been done over the Papago Indians and a huge amount of damage has been done to the property and the health of the Papagos.

Also, the Revised Draft Environmental Impact Statement doesn't adequately show the serious health effects that may occur -- no one knows, they say, so therefore it is safe to fly over people. I seriously question the safety of living under these dogfights and

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...possible, and I hope you will support me and my community in trying to stop such a dangerous health hazard from happening in our home.

It is possible for this to be done away from people.

Thank you for your help.

Sincerely,
Barbara Rodman

October 28, 1983
RR 10 Box 440
Glenwood, New Mexico 88039

Mr. Alton Chavez
HQ TAC/DEEV
Langley AFB, VA 23665

Re: Inadequacy of Draft Environmental Impact Statement for F-15 pilot training in Reserve MOA

Dear Sirs:

May I say at the outset that although I am familiar with the process of reviewing Environmental Impact Statements, and will respond for the record, I do not consider that I am dealing with gentlemen, nor do I feel that your's is a legitimate attempt to assess the true impact of sonic booms on the Reserve MOA. Rather, I feel that the Air Force, in an overzealous attempt to secure additional airspace is perpetrating a dangerous breach of the intent of the NEPA, and thus represents an untenable threat to democratic process. If this is a precedent which is allowed to stand, and is followed by other branches of the Armed Services (as appears to be the case also with the Navy in Fallon, Nevada), then it appears that our nation is being run in the very fashion we have charged our military with combatting.

I have enclosed a copy of a letter dated December 26, 1979 to which I received no reply or acknowledgement. It was the product of five hours of meetings in the Pentagon and many others on Capitol Hill. I would like it too to be included in the DEIS.

237 In that letter I questioned one of your five basic premises used in even considering areas for supersonic flight: "that there be no conflict with existing operations." Your continued adherence to a policy of not using existing MOA, on weekends appears cavalier in the face of the undeniable impact that sonic booms would have on a new and, in the face of this document, illegal SOA. In this day and time of limited resources and furding it is arrogant for any public entity, which the Air Force remains, to ignore the greatly inflated costs associated with inefficient employment of existing resources. In the end, you may well have to learn the lessons of frugality that the rest of us are learning and dovetail your "existing operations" in a more efficient fashion. 237

Hereafter, let me summarize the deficiencies of your document as I see them:

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1. The present DEIS is wholly insufficient in its discussion of alternatives. It is inadequate, as defined by NEPA, as an instrument to allow an objective viewer the opportunity to make a reasoned decision. This is the very heart of the NEPA and leaves you heir to lawsuit and injunction. Your document is remiss particularly in the areas of evening and week-end flying, the consideration of re-deployment of other now-conflicting training programs to other MOA's, and the deceptive logic of conveniently reduced operating elipses which in their new form could be placed over Tombstone, Talon and McGregor.

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2. Also at the heart of the NEPA, and in the minds of Americans today, is your conveniently omitted cost-benefit analysis. When the true cost of flying F-15's (which is deceptively distorted on line 6 of page F-2) all the way to the Reserve MOA is compared honestly with other alternatives, it is clear to a prudent man that Reserve is a very expensive alternative which provides very little practice time. Without an adequate cost-benefit analysis your DEIS is legally inadequate and reinforces the impression that your document is faulty at best and fraudulent at worst.

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3. There is clear and deliberate fraud involved in those alternatives which have been cited in the extant document. The comparisons with Valentine MOA and Gladden MOA with regard to population density, economic impact, real estate values etc. are fraught with deliberate and inexcusable misrepresentation. Such prevarication is not permissable in our system no matter how complex the issue; how powerful the agency, nor how just the cause.

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4. There is a clear and deliberate attempt to mislead the public and those agencies asked to review the DEIS into thinking that the impact of the sonic booms would be contained within an elipse 12 miles by 18 miles. Even beyond the absurdity of thinking that a pilot engaged in dog fighting at 1.5 mach or 1000 MPH could even recoginize boundaries of an area he can fly across in 45 seconds, is the obscured question of lateral spread of sonic booms. It is an uncontested (but barely mentioned) fact that booms have a lateral spread of as much as 14 miles from the aircraft's flight path. The U.S. Weather Service recently suggested that booms may travel up to one hundred miles under recurring climatic conditions.

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Using the conservative figure of 14 miles and considering that the proposed SOA abuts the Gila Wilderness along a line that is forty miles long, it is clear the Air Force is intending to illegally impact 370 square miles of the nation's first legally protected wilderness. The same undescribed impact will result to the Aldo Leopold and Blue Range Wilderness areas. In addition it is my firm belief that there is no way that this proposal can avoid violating the spirit of the Wilderness Act, the rights of citizens there under and the intent of Congress.

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243 Little or nothing is said about the elk, bighorn sheep, peregrine falcons or bald eagles. These are inexcusable omissions considering that the Reserve MOA is the only one of the MOA alternatives that is underlain by significant wildlife habitat. It will also be the first program to continuosly inflict sonic booms on our National Forest. It is cavalier and negligent to take such things lightly. 243

5. The DEIS is perhaps most grossly inadequate in the area of describing the body of research and literature describing human response to protacted exposure to noise. What is being proposed is a morally and ethically reckless medical experiment with no controls on the effects to humans of absurdly loud noise. There is no question that the Air Force is planning to inflict noise which is many orders of magnitude greater than the acceptable levels established by the Evnironmental Protection Agency in its decision on the SST and OSHA in its administration of industrial standards. There are many standard text book studies of the startle reflex, stress syndrome, and autonomic nervous system reaction to "fight or flight" reactions. That these have been omitted points either to the inadequacy of the writers of the document, or an actual act of deception. Needless to say, the document can not be considered a Final Draft until such human responses are fairly noted.

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In conclusion, the DEIS submitted by the Air Force is wholly inadequate and insufficient in many areas and suggests a deliberate attempt to mislead the very public that it was designed to protect. We appeal to your better judgement and stand ready to initiate legal action.

Sincerely,

Dan Campbell

Dan K. Campbell

xc Pete Domenici U.S.Senate
Jeff Bingaman U.S.Senate
Toney Anaya Governor

DKC/jm

Dan K. Campbell
Centerfire Sanctuary
Box 63
Luna, New Mexico 87824
December 26, 1979

Dr. Carlos Stearn
Deputy for Environment and Safety
U.S. Air Force
Room 4C885, The Pentagon
Washington, D.C. 20330

Dear Sir:

Thank you for arranging our meeting on December 4 and the subsequent meeting with Lt. Col. Clark, Majors Hackman and Bullock and Mr. Dean. As you know, I conveyed many of the items we discussed about the F-15 pilot-training program in the Morenci MOA to Senators Schmitt and Domenici, Congressmen Lujan and Runnels and various members of the Environmental Protection Agency, Council on Environmental Quality, affected federal agencies and conservation groups in Washington. I felt our meetings were productive as for the first time we discussed some logical alternatives to impacting yet another region of New Mexico with sonic booms.

For review, you'll remember that my major objectives were:

The DEIS as it stands is a misrepresentation of the intent of the NEPA

- it is wholly insufficient in its description of the natural environment affected (making no reference to the fact that the Morenci MOA is the only one in the state which is completely high altitude forest with great concentrations of wildlife). It ignored the existence of reproducing Bald Eagles which are protected by Endangered Species Act. It ignored the unusual protection of the San Francisco River afforded by the Wild and Scenic River Inventory. It misrepresented the impact on the Gila Wilderness, first designated wilderness area in the U.S.

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The DEIS both ignores and misrepresents the known impact of sonic booms on human beings. These arguments are being debated on the Capitol right now with regard to civilian air ports (Senator Canon's Committee) and were thoroughly discussed in regard to the Concorde and other Supersonic Transports.

The Air Force has breached NEPA guidelines by inadequate public announcement and insensitivity in handling the public.

These deficiencies are well known by now. Perhaps my greatest reaction, which led to the alternatives I discussed with you and have outlined again below, was to Col. Smith's cavalier comment

about why the Morenci MOA was chosen over others available to Holloman AFB. He said, "Well you know our boys can just drive on over to your airspace, work a 9 to 5 and get home to their families for evenings and weekends." That statement led many of us in the audience to feel that Morenci MOA, with all of its irreplaceable biological and historical assets, was chosen as a simple convenience for 30 student pilots. This led me to begin asking questions about the Air Force's present practices of utilization of air space and personnel. Indeed I discovered that of the MOA's available within a 150 mile flight radius of Holloman AFB, none is used on weekends, nights or holidays (with some minor exceptions). Now this operational practice is neither legal policy nor law; it is said to be a "mitigation" to limit the total impact of sonic booms on civilians in the airspace. As you will see, I have recommended weekend practice in existing MOAs in three areas where there are no people, hence no need to mitigate the impact of sonic booms to five days per week.

I adopted my line of reasoning from the four criteria you used in your original search. The three MOA's I recommended for weekend training (Pecos, excluding Ft. Sumner; Talon, excluding Artesia; and McGregor as it stands) meet each of these criteria:

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- they are within 150 miles of Holloman. In fact, each of the three is closer to Holloman than Morenci, netting a clear savings in fuel and time required to perfect each sortie.
- they are transited by fewer commercial airways than Morenci. The use of Morenci would require re-routing three commercial airways; Pecos (excluding Ft. Sumner) would require zero; Talon re-routes one, and McGregor zero.
- They are areas with even sparser populations than Morenci. As I described the configuration of each operation area, allowing a 15 mile radius around Ft. Sumner and Artesia, flights over these areas pass over no population centers. In contrast, flights over Morenci fly over four population centers, including Reserve, the county seat of Catron County.
- they are areas of the same or greater size than Morenci even when the two towns are excluded.

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In our meeting and the subsequent one with your operations staff, we agreed that we are looking for new homes for only 300 sorties per month. We agreed that 400 flights would occur as described at White Sands Military Reservation and 300 over the Valentine MOA in Texas (which itself is larger than Morenci, has fewer people, and no commercial airways).

A quick statistical review of adding two more days of flying over these sparsely inhabited areas will show an increase of 40% more sorties available over and beyond the present "saturated" use by T-38's, F-15s and other craft presently using these areas. You will quickly discover that by using those areas you already have

access to more time-efficiently. You will actually net more than the 300 sorties you need each month for the F-15.

Philosophically the matter looks like this. The State of New Mexico has already given over 19% of its land area to Military Management. Land, especially as it is impacted by sonic booms, is a finite resource. The Air Force, like every other public and private agency, must yield to the fact that finite resources must be used more efficiently and effectively. Inasmuch as the encroachment of the Air Force into yet another hitherto unimpacted area is a politically and biologically sensitive question, we have taken the matter before the appropriate agencies. We feel that the present resources at the Air Force's disposal must be used to their fullest advantage before an area as unique as the Morenci is impacted for reasons of convenience.

Throughout our meetings there were only three arguments made and countered to this proposal. They were

1. The five day week was originally adopted as a mitigating practice to lessen the impact on civilians in the areas of overflight. As was pointed out above, the three areas described do not have population centers to begin with; thus the need for mitigation is nullified.

2. "The morale of the affected staff would be at risk." It would do well here to point out that many occupations in the U.S. require a seven-day readiness. The Air Force, particularly with its mission of around-the-clock preparedness is no exception. We are dealing here with only 30 young pilots who are presumably prepared for unusual service and who are not likely to come with families. We are not suggesting that they work anything but a five-day week, only that it be staggered with the work week of T-38 pilots, other F-15 pilots and others who use the airspace Monday through Friday.

3. "Adding two more days of flight time to Holloman's schedule would be costly and might drive the cost-per-sortie up." Though there might be a slight added expense (which itself might be offset by savings in fuel and pilot-time because of the nearness of the alternative MOA's), we are assured that Holloman AFB is not only staffed, but is operationally ready seven days per week. That is to say that no new support staff or attendant crew would be required; only that existing personnel be reassigned on a staggered basis. There is nothing novel in this. Shifts in utilization of finite resources are being made throughout the United States at this time.

Thus my proposal that the Air Force explore better utilization of MOA's available to Holloman with existing supersonic capabilities does three things:

- it allows the Air Force to avoid the Morenci MOA with its biological richness (and political sensitivity) in favor of areas with low altitude, arid ecosystems with sparse

populations of wildlife and human beings.

- it keeps the F-15 at Holloman and concomitant income in New Mexico.
- it allows the Air Force to move forward immediately with its program of pilot training at a time when military preparedness is unquestioned.

I have followed your advice and have referred these matters to appropriate representatives on Capitol Hill. If I understood you correctly, you feel that the impulse for the Air Force to consider a policy of weekend flying should come from the political quarter. We will urge your elected leaders to encourage you to do so. I believe that to do otherwise would be irresponsible.

Sincerely,

Dan K Campbell

Dan K. Campbell

DKC: phm

cc: Senator Harrison Schmitt
Senator Pete Domenici
Congressman Harold Runnels
Congressman Manuel Lujan
Governor Bruce King
Lt. Col. Tip Clark - USAF
John Ossolin - Council on Environmental Quality
Larry Tackman - Chairman, Catron County Commission
Stedeen G. Kelly, Esq.

BUENA VACA RANCH

ROUTE 10, BOX 135
GLENWOOD, NEW MEXICO 88039

DAVID AND BECKY VACKAR
(505) 539-2771

Sept 5, 1983

Dear Sirs,

I am concerned with the land ranching situation in Catron County and would like to express my feelings on the subject. The environmentalists, the bureaucrats and the economy of our county, of it is disagreement to some from the area. I am certain that experts and other trained professionals are employed to make decisions, laws, rulings and the like to preserve land, plant, animal and mineral resources. But these people should not try to set a "straight-jacket" for ranchers and farmers who have been working the land for generations. Their decisions on the management and handling of our resources should be based on facts. I know that the land is not being used as it should and I also know that it can be improved. Please listen to the ranchers and farmers who live, work and depend on the land for their livelihood.

Respectfully,
Becky Vackar

[redacted]
Box 267
Glenwood, N.M.
88039

GLENWOOD NM
NOV
2
PM
1983
88039

Senator Jeff [redacted]
502 Hart Senate Office Bldg
Washington, D.C.
20510

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[redacted]

247

October 23, 1983

Senator Jeff Bingaman
502 Hart Senate Office Bldg.
Washington, D C

Re: Air Force proposal to use airspace over Reserve, N.M. and area for Supersonic flights

Dear Senator Bingaman,

Fifteen years ago my husband and I fell in love with the Glenwood, Reserve, Gila Mountain and Wilderness area in Western New Mexico as a magnificent place of peace, tranquility and superb natural beauty. These conditions lend themselves to healing of life-weary bodies, souls and nerves, enabling a person to be active outdoors in work as well as recreation, and be surrounded by the serenity of these majestic mountains.

We saw the same conditions as an excellent setting in which to raise Thoroughbred race horses as these animals tend to be very highstrung and easily startled and frightened, even by a loud sharp voice. A race mare, retired from racing to become a brood mare must have a serene calm surrounding so she will not become startled and lose her foal.

We decided last summer to fulfill a life-long dream of a small Thoroughbred breeding farm in this area. In late August of 1983 we moved ourselves, all our possessions and our two excellent brood mares, who are both in foal at this time, to Glenwood. We are selling our house and property in Texas to invest everything we have of time and money here toward this goal.

If the Air Force is allowed to perform their F-15 supersonic training missions over this area as they have requested, the resulting bombardment of sonic booms would reduce these valuable brood mares to quivering nervous wrecks and most certainly cause them to lose their foals. These foals are the product of our business, so such an occurrance would wipe us out completely. We ourselves would also be terribly affected by the invasion of these very startling booms against the peace and tranquility we sought and now have in this area.

Setting personal business aside for a moment, I must also point out that a mountain wilderness area like this one is becoming a very rare and precious thing and should be the last place anyone would ever consider as a location to introduce such a potentially devastating disturbance as these sonic booms would be. All the magnificent species of wildlife here would be continually startled by this un-natural and sudden earth-shaking noise, their natural fight-or-flight reflexes being repeatedly jolted into activity. How could they possibly

(Cont'd)

live and reproduce normally under these adverse conditions, thrust upon them by the very human race who set this area aside for them to thrive in? They cannot be replaced! This would be like using a priceless art collection for rifle-practice targets.

There are a large number of families who have lived here for many years, working very hard at raising their livestock and operating their businesses, as well as many who have chosen this area to enjoy their retirement in peace, quiet and beauty. All of us here would indeed be very adversely affected by the sonic booms. 249

In summation, we stand adamantly opposed to the proposed use of this area for the F-15, or any other, supersonic training missions or flights.

Sincerely,

Carol Bekken

Dennis W. and Carol Bekken
P.O. Box 114
Glenwood, New Mexico 80039

Nov 3, 1983

Dear Senator Bingaman,

I am writing to you concerning the Air Force's proposal to fly supersonic flights over the Reserve MOA. I certainly hope that you will come out strongly in favor of the people here in Catron County and of the hundreds and hundreds of other New Mexicans who use the Gila National Forest and the Gila Wilderness as a beautiful and unique area to ~~escape~~ escape away to.

It is beyond me how the Air Force could even suggest such a proposal. I believe in the Air Force, but when our Armed Services sink to the level of inflicting harm on American people in order to "serve" protect" the people— that is wrong. I don't see how anyone could argue ~~that~~ subjecting living beings to hundreds and hundreds of sonic booms a month is not dangerous. In fact, the evidence

states quite clearly that sonic booms are detrimental to human health, as well as property.

Is it worth it? 1983 OCT -6 AM10 35especially when I firmly believe that alternatives do exist and more economically sensible alternatives at that. I urge the Air Force to use White Sands on the weekends and at odd hours. Surely they can be a tad flexible.

Please support us. We need your help.

Thank-you,

Katie E Skaggs
Box 182
Glenwood, NM
88039

Roxanne L. Bates
6605 Whitewater Ln.
Colorado Springs, CO 80911

Senator Jeff Bingaman
502 Hart Senate Office Bldg.
Washington D.C. 20510

Dear Sir:

This letter is in support of keeping the U.S. Air Force out of Catron County, New Mexico. This is no area to be testing fighter planes. The people that live there and those of us that look upon Catron county as a peaceful haven need the quiet and space that exists there. Why not use White Sands - they have already leased that area up.

It is alarming that in our effort to "protect ourselves from communism", we may become as single tracked in our militant way of life as they are in the USSR..... Who will protect us from our own military? You must do that - Please Help -

Roxanne Bates

Dos Burros Ranch and Orchard
P. O. Box 267
Glenwood, New Mexico
88039

505-539-2371

Oct 28, 1983

Dear Mr. Chavis

Once again I must voice my objection to using the Reserve MOA for a supersonic test flight area.

The Air Force has yet to convince me of the need for such air space and that the effects of such "sonic boom" will not adversely affect Catron County. 251 251

Also in the light of the obvious falsification of documents by the Air Force in the recent DEIS one must question the validity of any of the information presented.

Sincerely

Aaron W Manelos

Dos Burros Ranch and Orchard
P. O. Box 267
Glenwood, New Mexico
88039

505-539-2371

Oct. 21, 1983

Dear Senator.

I would like to voice my opposition to the use of Catron County as a supersonic test range for the U.S. Air Force.

Based on the information (and the misinformation) to date there is no justification for such flights and the use of our County as a test area.

The Air Force has done a shoddy job in their Impact Statement and as established at the Oct. 20th Sonic Boom Meeting actually doctored documents

I certainly hope we have more support in the future than you have shown so far.

Sincerely

Aaron Manelos

Fred & Gene Bouldin
P. O. Box 171
Glenwood, N.M. 88039
Sept 13, 1983

Dear Senator Bingaman:

The Air Force plans to shock Southern Catron County with daily Super Sonic Booms, some of which, they admit, will be loud enough to break windows. This we know first hand.

They ignore medical studies that indicate that Human Health will be endangered. Glenwood has a large count of Senior Citizens well over 65 years of age. Do these people have to be "highly annoyed" as the Air Force say they will be.

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Please look into their "Whitewash" and protect our Homes and Health.

Sincerely
Fred & Gene Bouldin

CA 20576

P. O. Box 7
Glenwood, New Mexico 88039
August 30, 1983

PROPOSED SUPERSONIC FLIGHTS
OVER THE RESERVE MILITARY AREA

CongressmanCBill Richardson,
U. S. House of Representatives,
Washington D. C. 20515

Dear Congressman Richardson:

We are appalled at the Air Force proposal to turn this peaceful, scenic area into a battle ground for dog-fighting F-15 jet planes. Supersonic booms can be loud enough to break windows and, because there is no way of anticipating them, the startle effect is devastating.

We came here several years ago because we were attracted to this very scenic, peaceful region as a desirable place to live.

253 The Air Force proposal would seriously impair the residential value of this community, including the market value of our homes. 253

In our opinion, the Air Force has failed to demonstrate any real need to convert this beautiful, quiet area into a jet plane combat training area.

We Hope that you will look into this Air Force proposal and do what you can to protect us.

Sincerely,

Ben H. Thompson

Mathilda Jane Thompson

P.O. Box 7
Glenwood, N.M. 88039
Oct. 29, 1983

Headquarters Tactical Air Command
/DEEV
Langley Air Force Base, Va. 23665

Subject: Revised Draft, EIS,
Supersonic Flight Operations in
the Reserve MOA, Holloman
AFB, New Mexico.

Dear Sir:

Enclosed is my statement on the proposed supersonic flight training area in our vicinity.

We are dismayed by the proposal and hope that you can provide adequate combat training for pilots without invading this unusually scenic/recreational area.

Sincerely,
Ben H. Thompson

Prepared Statement Concerning Proposed Supersonic Flight Operations in the Reserve Military Operations Area

Mr. Chairman:

I am Ben H. Thomson, a retired assistant director of the National Park Service, living in Glenwood some ten miles south of the proposed supersonic flight operations area.

The Reserve Military Operations Area is situated in an unusually scenic, picturesque region, much of which is of national park quality. It is relatively unspoiled, peaceful and quiet. Most of the people living here came here because they want to live in this kind of environment. Many retired people have chosen this region for their homes, as my wife and I have.

We are dismayed by the proposal to use a large part of the Reserve MOA as a supersonic combat training area, with the inevitable impact of many supersonic booms daily for the indefinite future.

Your Reserve and Valentine MOA reports state frankly that by far the major percentage of claims against the Air Force for supersonic boom damage is for broken and cracked glass. That fact, alone, is proof of the noise, annoyance, inconvenience and expense imposed upon people forced to live in a supersonic boom area.

I appreciate the need for full and adequate training of Air Force pilots for aerial combat.

In view of the outstanding character of this region and the sacrifices that we and future residents and visitors here would have to make under a daily supersonic combat training program, I submit that it is incumbent upon the Air Force to make absolutely sure that its pilot training program cannot be properly carried out unless it has the proposed use of this area.

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October 20, 1983

Aug. 29-83.

In CA Letter # Doc # 255

(Title Doc Code Book)

Dear Congressman Bill Richardson,
The airforce plans to shock southern Eatron County with daily supersonic booms, some of which, they admit, will be 1ST 2ND 3RD loud enough to break windows.

They ignore the medical studies that indicate that human health will be endangered and they claim that at worst only about six persons in the county will be "highly annoyed."

Please, look into their whitewash and protect our homes and our health!

Sincerely,

Elfriede Mueller
Rt. 10 Box 175
Glenwood, N. M.
88039

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Glenwood N. M.
Sept 17, 1965

Senator Jeff Bingaman

Please help us, in our fight to keep the Air Force and their Supersonic booms away from our beautiful County.

Believe me, the ones we had before was bad enough.

Please for our health and our livestock, do what you can.

It will certainly be appreciated.

Thank you
Mrs Kenneth Ford

September 7, 1983

Senator Jeff Bingaman
U.S. Senate
Washington D.C. 20510

Dear Senator Bingaman:

Just over one year ago I moved my family to Elmwood, New Mexico and invested our life savings into a small business here. This step was the fulfillment of a dream we had strived for years to attain, that is to locate in an area that offered a quiet less hectic lifestyle, and also offer us a good long range economic opportunity.

I have just recently learned that the Air Force has a

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proposal to conduct Jet plane combat training operations in the air space of this area.

I strongly oppose such a proposal, on the basis that it will adversely affect the tranquil life-style, and I anticipate would have a negative economic impact on attracting customers to my business — which would also impair resale value of my property

I urge you to use all your powers to prevent this proposal from becoming reality.

Sincerely,

Leonard L Leth

Leonard L. Leth, Owner/Operator

LES OLMOS GUEST RANCH

256

256

Wayne C. Clark
Post Office Box 55
Glenwood, NM 88039

Glenwood New Mexico
September 17, 1983

Senator Jeff Bingaman
United States Senate
Washington D.C. 20510

Dear Senator Bingaman:

I am very disturbed by the Air Force proposal to turn Catron County into an aerial combat training area. Having lived in Glenwood for the last four years, we have already experienced numerous "Sonic Booms" and sonic booms. The anticipated booms have a very disturbing effect emotionally upon my wife and I as well as other residents of this area.

I feel that implementation of the Air Force proposal would be extremely detrimental to the health of the people of this area and I therefore strongly protest this proposed operation.

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Sincerely
Eugene C. Clark

Glenwood, N.M.
Sept. 9, 1983

Senator Jeff Bingaman
U.S. Senate
Washington, D.C. 20510

Dear Senator Bingaman:

The Air Force seems determined to use the air over this beautiful, serene wilderness and near-wilderness area for training pilots in "dog fighting". As you know, this results in heavy sonic booms. These booms not only shatter glass; they also shatter human nerves! At times one feels really physically ill after a heavy boom - one cannot be prepared for them, nor does one ever become accustomed to them. We've been subjected to booms for over three years now.

258

There are areas of badlands or desert which it is possible to use for this purpose. Our lovely country is a haven for birds and wildlife and has always been quiet and pleasant. We chose to buy here for that reason fourteen years ago and have retired here.

258

Please, sir, do all that you can to help us in this matter. If the Air Force has its way in this affair one of the few natural, largely unspoiled, areas of the country will be ruined. Your assistance will be very much appreciated!

Sincerely,

Roselyn E. Cheek

Rosalyn E. Cheek
Post Office Box 55
Glenwood, NM 88039

Box 232
Glenwood, New Mexico 88039
September 3, 1983

Mr. Jeff Bingaman
U. S. Senator
502 Hart Senate Office Building
Washington, D. C. 20510

Dear Honorable Senator Jeff Bingaman:

As our Senator in Washington, the people in Catron County hope you can help prevent the proposed super-sonic flights over the Morenci Operation Area by the Air Force.

252 You may know there are many elderly people living in this area who would be adversely effected by the stresses of startle caused by super-sonic booms. The reason many older people moved to this peaceful, natural area is to get away from unhealthy pollutants and noise. Is there no place one can go? Property values will ultimately be reduced if such adverse conditions prevail as sonic booms, broken windows and other personal disadvantages. 259

I've been led to understand that the Valentine MOA in Texas could handle this training program because we all know that our Air Force must be adequately trained.

We will appreciate any assistance you can give. There is a hearing in Reserve scheduled by the Air Force for September 15. We wish it could be postponed a month to give more time but your urgent attention is requested.

Sincerely,

Agnes B. Lorntzen

Agnes B. Lorntzen

CARTON
COUNTY

1983 AUG 29

Rt. 6 Box 600
Elizabethton, TN
37643

August 26, 1983

Dear Senator Bingaman,

It has come to our attention that DOE again the Gas Corp plans to invade Carter County with daily explosive blasts, some of which, they admit, will be loud enough to break windows.

They continue to ignore medical studies that indicate human health will be endangered, and they claim that at worst only about six persons in the county will be "highly annoyed."

Please look into this matter and protect our homes and our health. We intend to prove their last Environmental Impact Statement is biased and inaccurate.

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Sincerely,
Connie and Cheryl Allen

In CH Letter # Doc # 20573

Profile (See Code Book)

Congressman Bill Richardson

I

Air Force Plane to stop

Southern Catron County

1ST 2ND 3RD

daily supersonic boom

some of which, they admit will

be loud enough to break windows.

my husband had a very bad stroke

I don't think he can take that kind

of noise

We just bought our home in

Glenwood and can't afford to

move where it will be quieter

Please help Protect our

homes and health

Thank you

Mrs. J. Louise Lyon, Sr.

Box 196.

Glenwood N Mex.

88039

261

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US 2602 GOVT COPIES

10/18/83

U.S. Senator Jeff Bingaman
502 Hart Bldg.
United States Senate
Washington, D.C. 20510

Dear Senator Bingaman:

Enclosed is a copy of my recent letter to the Air Force regarding its RDEIS dealing with supersonic training flights over Catron County. Please see that all alternatives are studied and that our area doesn't have to suffer because of lack of voice.

Thank you,

Cecil Howard
Rt. 10, Box 540
Glenwood, NM
88039

Headquarters
Tactical Air Command/DEEV
Langley AFB, VA 23665

October 18, 1983

Dear Sirs:

Potentially as one of the six people in Catron County whom the Air Force estimates may be "highly annoyed" by the proposed supersonic training flights over this area, I must say that I am already highly annoyed by the RDEIS' apparent total disregard for logic and reason. The Air Force arguments in favor of the flights which were thoroughly defeated before by learned statements have been reintroduced with flimsy disguise and misinformation.

My family and I have invested twelve years of personal resources in developing and maintaining a home and environment in Pleasanton although my teaching position is with the university in Silver City nearly sixty miles away. I commute to work so that we can live here in or near an area that until now has remained relatively unthreatened by the wholesale distruction so common in our unthinking world of today.

For the very reason that our beautiful county is special it is also sparcely settled; thereby making it a target for Air Force "games". Picasso's "Guernica" is a lasting reminder of the suffering caused when the powers forget that small and remote places are inhabited by other human beings like themselves.

292 Our farm, purchased in 1971, still has the original log cabin built in 1870 which shows the long term occupancy of our site and the particular qualities attracting man to settle here. As the current residents, we can't believe that our lives would remain undisturbed nor that our property values would not change if the flights are accepted. 292

Speaking for ourselves, our immediate friends and neighbors and all the other "real" people, including the 60,000 annual visitors, who would all be directly affected, we ask the Air Force to select one of the reasonable alternatives.

Sincerely,

Cecil Howard
Rt. 10, Box 540
Glenwood, NM 88039

CH [illegible] # 20578

Glenwood, New Mexico
August 26, 1983

Congressman Bill Richardson
U. S. House of Representatives
Washington, D.C. 20515

1ST 2ND 3RD

Dear Representative Richardson:

My family and I wish to call your attention to a developing situation here which may have serious detrimental consequences.

Along with other area residents, we have recently received a copy of the Air Force's "Revised Draft, Environmental Impact Statement, Supersonic Flight Operations in the Reserve Military Operations Area, Holloman AFB, New Mexico", dated July 1983. This revision comes 4 years after the original draft. In October 1979, the public expressed extreme opposition to the proposed supersonic flight training program, which admittedly would produce "Booms" severe enough to break windows and damage structures.

263

We feel that it is not possible to estimate accurately the degree of resulting destruction to human physical and mental health, to property, to domestic and wild animals and to the unique beauty and solitude of our National Forest and Wilderness Areas.

We believe that the new AF draft is just a more lengthy version of the original, expressing the same limited point of view, without realistic alternatives; that it does not fairly consider our area from the aspect of human use and the special qualities of our National Forest and Wilderness.

263

We earnestly hope that a fair solution will be found and that this Air Force program will not be imposed upon us.

We respectfully urge your attention to this immediate problem.

Sincerely,

Marilyn Howard

Marilyn Howard
Rt. 10, Box 540
Glenwood, New Mexico
88039

Glenwood New Mexico
October 25, 1983

Senator Jeff Bingaman
U. S. Senate
Washington, D.C. 20510

Dear Senator Bingaman:

I am enclosing a copy of my letter to be included in the final copy of the Air Force's "Revised Draft, Environmental Impact Statement, Supersonic Flight Operations in the Reserve Military Operations Area, Holloman AFB, New Mexico". I hope you will find time to read it and others you will receive.

People (a significant number, I hope) are beginning to wake up and see what a mockery of democratic ideals these Environmental Impact Statements comprise.

We will sincerely appreciate your impartial consideration of all facts concerned, and ask your support in this matter of greatest importance to citizens here and elsewhere.

Sincerely,

Marilyn Howard

Marilyn Howard
Rt.10 Box 540
Glenwood, N.M.
88039

Glenwood, New Mexico
October 25, 1983

Headquarters
Tactical Air Command/DEEV
Langley AFB, VA 23665

Gentlemen:

I wish to add my voice to the hundreds of Catron County citizens as well as concerned non-residents overwhelmingly expressing rejection of the proposed Air Force Super Sonic flight training program here in the Reserve MOA. While we understand the necessity of the operation, we demand that a more appropriate location be found. It would not be fair for residents elsewhere to suffer the burden either. Instead, some place of special designation must be established (like White Sands) which has been evacuated or is uninhabitable.

264 The fact has been pointed out that when the F-15 came to Holloman AFB, it was on the basis that no areas outside White Sands Missle Range would be affected. ("Environmental Determination for the Proposed Beddown of F-15/T-38 Aircraft at Holloman AFB, New Mexico (Oct/76)". 264

A logical examination of the RDEIS by even a layperson reveals an inconclusive document, and a deeper investigation has shown it to be incomplete, containing omissions, contradictions, and assumptions with information distorted and misleading which can only present the conclusion that the entire document is presumably intentionally deceptive. As in the original DEIS of 1979, the same one-sided policy of the Air Force is defended throughout, with no alternatives examined realistically. Comments and studies citing specific weaknesses have been submitted for inclusion in the final RDEIS by other persons, so I will not mention more here.

Other communities in various geographic locations in the U.S. are getting this same sort of treatment from the Navy and the AF. Residents in Wyoming and Nebraska who have lived near the Minutemen missle silos for years have recently received DEIS proposing to install 100 MX missles in existing silos. This installation will require more land, more water and some residents will have to leave their homes. Critics fear that once the new missles have replaced the old, the Air Force may want to build an anti-ballistic defense system to protect against attack. They also wonder what would happen to these rural regions if the MX missles were to be launched or accidentally blown up. The AF statement concludes that with the exception of possible danger to a few threatened or endangered species of wildlife, the project's effect on the area will be "generally moderate-to-low". (Christian Science Monitor, Oct. 14, 1983).

"What next?", we have the right to ask. The AF procedure seems to involve a disregard of the very rights and principles which they have sworn to defend. As one highly annoyed citizen at the Reserve public hearing burst out, "This is a farce!"

Is it any wonder that "we the people" protest the proposed daily degradation of our lives and property, and subjection to an uncontrolled medical experiment? As expected, we will find every available means to fight and prevent these consequences.

Sincerely, Marilyn Howard

Marilyn Howard
Glenwood, New Mexico 88039

1-248

DEEP CREEK RANCH
GLENWOOD, NEW MEXICO 88039

November 1, 1983

HQ TAC/DEEV
Attn: Alton Chavis
Langley Air Force Base
Langley, Virginia 23665

Dear Sirs:

I am writing to protest the proposed Supersonic Training Flights over the Reserve MOA.

Most of the residents in this area consider this a "special" place to live. Many chose this area when they retired from city jobs, many chose this area because of the life style it afforded them, many long time residents continue to live here because it is a special place to them.

Why is this area so "special"? It affords peace and solitude if one desires, it affords an opportunity to get out into the forests, mountains, and valleys where one can almost always see elk, deer, antelope, bear, javelina, and many smaller species. It affords opportunities to fish in quiet lakes or streams(unpolluted-). Bird watchers love the area-- a north south flyway extends through this area. Ranchers like the area because of exceptional winter feed conditions.

The Air Force proposal to fly supersonic training flights will destroy this beautiful countryside, frighten the wild animals and cows and horses, birds will die, and people will develop health problems. The economic base of this area will diminish--the tourists and hunters will not return and the local ranchers will find it difficult to continue.

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It all seems to come down to the fact that we are to be used as "guinea pigs" in an experiment that can go on and on regardless of what the residents say. We are told we are unpatriotic because we do not wish to be subjected to this. It is like asking a group of people to agree to being bombed daily.

It appears evident that the Air Force has not fully explored alternatives that would eliminate the need to fly over populate d areas. Why not move the wing from Holloman Air Force Base to a base near water so that the flights could be made over the open sea? Ultimately this might prove more cost effective. Surely there are a number of such areas that could be available if the need is so great. Or why not use a facility already designated as a Military Reserve with all other planes and people barred from the area? I am certain the Air Force with all its trained personnel could find a better spot in which to practice. We recognize the need for training the pilots of the Air Force but we believe there are alternatives, that we here in Catron County should not be asked to serve as guinea pigs , that we should not be subjected to booms which could cause irreparable harm to the people in this area.

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Sincerely,

Mary Tackman

Mrs. Mary Tackman
Deep Creek Ranch
Glenwood, N.M. 88039

November 4, 1983

HQ TAC/DEEV
Atten: Alton Chavis
Langley AFB, Virginia 23665

Dear Sir:

I am opposed to the Air Force proposal to fly 300 supersonic sorties over the Reserve Military Operations Area.

The Revised Draft Environmental Impact Statement is inadequate and needs to be completely rewritten. A detailed study of the effects of long term exposure to sonic booms needs to be undertaken. It is surprising that this study has not already been done over the Papagoes in Sells, Arizona.

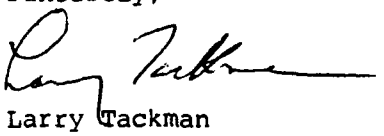
267

267

It appears that no detailed analysis of the many alternatives has been done. I feel that with a hard look at the high cost of flying the F-15's that the Air Force would realize the absurdity of flying 150 miles from Holloman Air Force Base.

The people of Catron County should not be subjected to these flights.

Sincerely,



Larry Tackman
Deep Creek Ranch
Glenwood, New Mexico 88039

DEEP CREEK RANCH
GLENWOOD, NEW MEXICO 88039

October 24, 1983

Honorable Jeff Bingaman
502 Hart Senate Office Building
Washington, D.C. 20510

Dear Senator Bingaman:

The citizens of Catron County strongly opposed the AirForce proposal to inaugurate a supersonic training program over the county. This was clearly demonstrated during a hearing held by the AirForce in Reserve,N.M. on the evening of October 20, 1983.

We are fully aware of the need of the AirForce to train combat pilots but we likewise are convinced that the AirForce has not fully explored more acceptable alternatives to flying over Catron County. The Environmental Impact Statement prepared by the AirForce is inadequate, biased, and irresponsibly not factual.

We are asking for your full support in recommending that this training program be carried out somewhere other than Catron County.

Sincerely,

Arthur and Mary Tackman

1-252

P. O. Box 12
Luna, N. M. 87824

November 3, 1983

HQ TAC/DEEV
Attn. Alton Chavis
Langley Air Force Base
Langley, Virginia 23665

Re: Proposed Supersonic Training in the Morenci Military Operations Area; Catron County, N. M.

Dear Mr. Chavis:

The purpose of this letter is to formally register my opposition to the proposed supersonic training over Catron County. I do not feel the Air Force has adequately studied the effects of the booms on residents, livestock or wildlife. The revised DEIS is still full of contradictions and misrepresentations. Apparently, some statistics used by the Air Force were intentionally falsified.

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After attending the hearing in Reserve on October 20, 1983, I am convinced the Air Force could use one of the alternative areas for this training. I urge you to consider us citizens, rather than statistics, when making your decision on the use of Catron County.

Yours truly,

Jeanne Mims

Jeanne Mims

~~Senator~~ Jeff Bingaman
U.S. ~~Senate~~
Wash. D.C. 20510

Randolph Jones
Box 80
Luna, N.M. 87824
9/1/83

Dear Senator Bingaman,

The Air Force is planning to shock Catron County with sonic booms shortly. You already have heard the story from the Glenwood Community. Please use your influence to change this situation.

I am a cattle rancher and can state with certainty that the low, fast flying jet planes are very hard on my cattle in the Luna area.

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I trust you will respond,

Sincerely,

Randolph Jones

October 21, 1983

HQ TAC/DEEV
Attn: Mr. Alton Chavis
Langley AFB, Virginia 23665

Re: Proposed Supersonic Flight Operations
in the Reserve Military Operations Area

Dear Sir:

The proposed flight of supersonic planes over the Reserve area is disruptive and distructive to the people, animals and property located in that area. The psychological and economic impact on the residents of this area is being greatly underestimated.

270

If the increase in supersonic training area is needed, I feel the Air Force should look to areas that because of their less populated nature would be less distructively affected than the currently proposed Reserve Area. It seems to me that such areas could be found in the area north of Quemado, north of Datil, the San Agustin Plains, south of Silver City, the Burro Mountain area, and areas south of Lordsburg and Demming. All these areas are of adequate size to meet the Air Forces' stated needs.

270

I feel that to destroy a peoples' way of life is wrong without truly considering all other alternatives completely.

Yours truly,

Jean Trotter

Jean Trotter
P. O. Box 65
Luna, N.M, 87824

8-1-83

Dear Senator,

I am writing to express my extreme concern over the proposed supersonic flights in the Roswell military operations area. I have read the EIS for these flights and conclude:

(1) The Air Force knows full well that these sonic booms will disturb a large number of people in Catron County.

(2) The Air Force intends to proceed with these flights despite the expressed opposition of the people of the county.

(3) Alternate sites will not be seriously considered because:

(A) opposition from people.

(B) Expense

(C) Inconvenience to military personnel.

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I would not wish sonic booms on any other people. But when it comes to sacrificing the people of Catron County for the sake of the almighty dollar or the convenience of the military, I say "over my dead body"!

(4) If all else fails, I'm prepared to move my domicile, along with others, to the gates of Holloman AFB until the flights stop.

Please help us stop these sonic booms!

Thank you.

Thomas Munzenrieder
Luna, N.M
87824

8-1-83

Dear Rep. Skeen;

I am writing to express my extreme concern over the proposed Supersonic flights in the reserve military operations area, originating from Holloman AFB. I have read their revised EIS and have come to the following conclusions:

(1) The Air force knows very well that the sonic booms generated in these flights will seriously disturb a large number of people in Catron county.

(2) The AirForce intends to proceed with these flights despite the expressed opposition of almost the entire population of the county.

(3) Alternate sites for these flights will not be seriously considered for the following reasons:

(A) opposition from people

(B) Expense

(C) Inconvenience ~~to~~ military personnel.

I would not wish sonic booms on any other people. But when it comes to sacrificing the people of catron county for the sake of the almighty dollar or the convenience of the military, I say "over my dead body"!

(4) If all else fails, I'm prepared to move my domicile, along with others, to the gates of Holloman AFB until the flights stop.

(over)

Please help us stop these proposed flights!

Thank you

Thomas Munzenrieder
Luna, N.M. 87824

In ECH Letter # 20575

Profile (See Code Book)

I

August 31, 1983 I

J.P.s CAFE
No. 4 Main Street
Mogollon, New Mexico
87824

Representative Bill Richardson
Longworth Building
Washington, D. C. 20515

C 1ST 2ND 3RD

Re:U.S.A.F. Supersonic Flight Ops. EIS
Reserve MOA

Dear Mr. Richardson:

This letter is my formal protest of the U.S.A.F. Supersonic Flight Operations proposal in the RMOA. I own and operate a business in Mogollon at the old J.P. Holland General Store. This 90 year old, 5000 sq. ft., 2 story adobe building will not tolerate the sonic overpressure as proposed. It is a witnessed fact the aircraft flown in the Reserve MOA do not maintain the current flight test floor or subsonic speeds. Frequently there are U.S.A.F. aircraft below the ridge line of Silver Creek Canyon where the town of Mogollon is located. We can only expect the obvious. Low altitude booms WILL distroy most the buildings in Mogollon.

272

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At J. P.'s Cafe we are currently dependant on 80% local return business. We specialize in comfortable atmosphere and fine gourmet food. If the U.S.A.F. is allowed to proceed with their proposal, Mogollon will lose the restaurant business. Economic impact will prevail.

Four years ago at the last sonic boom public hearing held in Reserve, I was formally placed on a mailing list for the revised EIS. I have not recieved this document to date. There is not sufficient review time to the next proposed hearing date. Please ensure the hearing date is pushed back at least one month to allow adequate review.

Sincerely,

Stanley E. King

Stanley E. King
Partner

cc:J. Baca
P. Domenici
B. P. Altanirano
P. Bardacke
J. Bingaman
J. L. Martin
B. Calkin
L. Tackman

October 25, 1983

I am a citizen of Catron Co, a registered Democrat, and I feel that sonic booms could take place in an area where so many people would not be affected. I don't want to hear sonic booms at all. Could you please do something about this?

Molly Hollender

1-260

P. O. Box 217
Quemado, N.M. 87829
Sept. 30, 1983

Honorable Jeff Bingaman
Hart Bldg., Room 502
Washington, D. C. 20510

Dear Sir:

I am writing to you on behalf of JENSEN & SONS SAWMILLING and the MIDNIGHT CRY MISSION, a recently formed missionary organization established for the training of missionary candidates for pioneer service in remote regions of the Far East.

We hope you like your new job and that you will stand behind the best interests of your State.

273 Our concern at the present time is the threatened danger of low-level flights over Catron County - Reserve-Quemado Lake area - with consequential focused and carpet sonic booms. Since the effectsof such sonic booms may be felt up to 28 miles this is going to cause a real disruption in the area. Sonic booms, especially "focused" ones are extremely detrimental to people - above allto the elderly of whom there are very many in this county. 273

274 In addition to the cirtical human element there is the matter of our livelihood; viz., that of ranching, tourism and real estate. There are bound to be very negative effects upon animals as well as humans. And it is beyond dispute that real estate values will slump to ZERO! No one will ever buy into the sort of environment we will have to live with if this thing goes through. Tourism will be a thing of the past. It will ruin Catron County for anything except the military. 274

We believe that the E.I.S. of the Air Force is faulty and that there are valid alternatives open to the military that would be suitable to meet their needs for the training of pilots. We know this is vital to the defenceof our country but feel this can be done on existing military reservations (e.g., Whitesands) and at much less expense to the taxpayers.

I do not know of a single person in this area who will willingly accept the proposed low-level flights, dog-fights and sonic booms over Caton County.

Please use your influence and your vote to stop this harmful, unpopular proposal. Human considerations ought to take precedence over cost-analysis proposals.

Sincerely,

James W. Jensen

[illegible] SAWMILLING
[illegible]

MIDNIGHT CRY MISSION
P.O. Box 217
Quemado, N.M.
[illegible]

P. O. Box 696
Silver City, NM 88062
October 17, 1983

HQ TAC/DEEV
Attn: Mr. Alton Chavis
Langley AFB, Virginia 23665

Dear Mr. Chavis,

I have reviewed the draft EIS for supersonic flight operations in the Reserve MOA. I am impressed by what is known about effects of sonic booms, but concerned about what is not known, specifically the effects on the health of animals and people living in the immediate area.

Wild animals, in general, are having a difficult time coping with encroaching humans and human caused pollution of various kinds all over the United States and the world. The area impacted in the Reserve MOA is an area that is still remote and relatively free of human encroachment compared to other areas in the United States. In addition, it is an area rich in wild animals, in numbers of species, if not numbers of individuals. The impact of sonic booms on individual species is not known. The area affected has had few studies concerning the endemic species. I think it prudent to at least have some basic information on the animals in the Reserve MOA before it is disturbed and the information irretrievably lost. Some estimates of numbers of breeding individuals, success rates of breeding, behavior of nesting birds, location of nests or breeding and brooding areas, areas important for feeding, and other information should be gathered. This information isn't necessary for all species, but at least for endangered, threatened, and most aparent species. Until these studies are completed, the "sorties" should be restricted to the Valentine MOA in Texas, where sonic booms have been occuring for some time. During this study period, concurrent studies should be conducted

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in the Valentine MOA to determine effects of the booms on wild animals. In this way, if future needs demand, the effect of sonic booms to wild animals in the Reserve MOA will be more apparent and we can make a rational decision on the sacrifices we feel worth making at that time.

I do not live in the area of the Reserve MOA. However, I am sympathetic to the desires of residents to keep their area as it was when they moved there or were born there, although many of their motives are probably selfish. I don't believe enough information is available on the effects of sonic booms on people. The Valentine MOA seems like an ideal area to study the effects, especially since fewer people are impacted. It may be that sonic booms and people are incompatible and oceans or vast areas of uninhabited desert will be used for "sorties".

Thank you for considering my comments in making your decision on the Reserve MOA. Please let me know the outcome of your decision. I have enclosed a self addressed envelope.

Sincerely,

Warren J. Shaul

Warren J. Shaul

cc:
U.S. Senator Jeff Bingaman
U.S. Senator Pete Domenici
U.S. Representative Joe Skeen

3305 Tom Lyons Drive
Silver City, NM 88061
October 31, 1985

Mr. Alton Chavis
Tactical Air Command/DEEV
Langley AFB, VA 23665

Dear Mr. Chavis:

Because I believe we must train the men of our Air Force over all kinds of terrain, I do understand the choice of the western part of New Mexico near Reserve in Catron County for training of F-15 fighter pilots from Holloman Air Base near Alamogordo, NM. However, the impact that these supersonic flights will have on the wildlife as well as human lives is undoubtedly too great to be acceptable. Many more people come into the Gila National Forest and Gila Wilderness recreation areas than reside in this part of the state. Both are used during all parts of the year. The effect of projected flights as low as 15,000 ft with resulting sonic booms of an intensity from 5.5 up to 10 pounds per square foot and coming as often as ten or twelve times a day cannot be tolerated for long. As I understand the plan, this would continue daily for up to a year. 276 276

We were subjected to a similar program in St. Louis, Missouri some years ago though not with anything like that frequency of flights and again about ten years ago when we moved to Silver City. Just two or three such impacts on our ears and nervous systems each day was difficult to endure and I cannot imagine how people can be expected to tolerate such a concentrated program as is planned.

The Wilderness was established for preservation of habitat for wildlife and I must object strenuously to any kind of intrusion by man that would effect the solitude of this habitat. Such flights are not permissible over National Parks and I believe the National Forests and Wilderness areas are equally valuable to man and wildlife as places of escape from the noise and pressure of our civilization. 277 277

Since New Mexico has already shared a large percentage of its land for military uses, I believe more consideration should be given to other possible sites for this training program in other states.

Yours truly,

May B. O'Byrne

cc: Governor Toney Anaya
U.S. Senator Pete Domenici
U.S. Senator Jeff Bingaman
Mr. Larry Tackman

1011 W. Florence St.
Silver City, NM 88061
October 29, 1985

Mr. Alton Chavis
Tactical Air Command/DEEV
Langley AFB, VA 23665

Dear Mr. Chavis:

I wish to express my opposition to the Air Force's plan to schedule some 3000 training flights per month for F-15 pilots at low altitudes over the Gila National Forest, including the borders of the Gila Wilderness, in Catron County, New Mexico. The fact that no one knows for sure what harm will result from percussion waves of such intensity and frequency as expected does not seem to me to justify using the residents and visitors (human and otherwise) of this area as guinea pigs.

The impact of relatively infrequent sonic booms from planes 30,000 feet or higher, which we experienced here in past years, was substantial enough. The startling effect of the noise literally made one jump and the pressure of the shocks effected structural damage of property. Considering that the percussion wave of these proposed booms will range from 5 to 8 times greater than the 3/4 psf level which EPA considers maximum for safe human health, it looks like a severe risk for the people experiencing such disturbance.

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Though I appreciate the need of the Air Force to train pilots for low flights over rough terrain, I feel that alternatives to this plan must be more thorougly investigated, and the country's defense requirements must be tempered by a respect for the welfare of the citizens.

Sincerely yours,

Marian A. Zimmerman

Marian A. Zimmerman

cc: U.S. Senators Pete Dominici, Jeff Bingaman
Governor Toney Anaya
Mr. Larry Tackman

WESTERN NEW MEXICO UNIVERSITY

SILVER CITY, NEW MEXICO 88061 [redacted] OGICAL SCIENCES

28 October 1983

Mr. Alton Chavis
Tactical Air Command/DEEV
Langley AFB, Virginia 23665

Dear Mr. Chavis:

Despite being a long-time supporter of our Air Force, and a proponent of a strong defense, I must express my opposition to the U.S. Air Force's plan to use portions of Catron County, New Mexico, for a purported 300 training flights per month for F-15 pilots from Hollomon Air Force Base.

The impact on humans and on wildlife, and the effect on wilderness values again have been either inadequately assessed or ignored. Certainly the Air Force's second Draft Environmental Impact Statement is no more adequate than the one prepared three or four years ago when a similar plan was proposed.

We biologists here at Western New Mexico University are particularly concerned over possible negative effects on area wildlife (including certain endangered raptorial birds). There surely are viable alternatives to using the Gila Wilderness and adjacent areas for such flight training.

279 Relatively low-intensity sonic boom activity during earlier training programs out here was disturbing enough. I understand that the Air Force now anticipates numerous daily sonic booms in the proposed training area, and that these will normally produce percussion blasts with an intensity of up to 5.5 pounds per square foot, and up to 10 or even 25 pounds per square foot under conditions of certain aerial maneuvers. Information from the Environmental Protection Agency indicates adverse effects on human health from sonic booms far below this order of magnitude. The effect on more sensitive mammals and birds can only be surmised. 279

European commercial supersonic aircraft were prohibited in the United States because of their noise association, yet their percussion waves were stated to be only about 1.5 pounds per square foot.

Even allowing for a degree of error in these figures, the expected impact of the proposed flights could be severe, especially as some sonic booms presumably will occur as low as 15,000 feet. (Those produced in the past from military aircraft in our region were generally above 30,000 feet.)

280 Like our national parks (whose air space is off-limits to military aircraft training), our wilderness areas and adjacent national forests are important not only to the welfare of their abundant wildlife but to that of many southwestern citizens and thousands of persons who visit these areas to relax and get away from the pressures of civilization--including sonic booms. 280

Yours sincerely,

Dale A. Zimmerman

Dale A. Zimmerman
Professor of Biology

cc: U.S. Senators Pete Dominici, Jeff Bingaman
Governor Toney Anaya

DAVID M. CLARK

Oct. 29, 1983

Honorable Senator Jeff Bingaman

I am opposed to 300 Air Force training flights per month over the Gila Wilderness Area.

There will be many booms some of which will be real blockbusters when within 10,000 ft of the average terrain of 7000-8000 ft. This will have an adverse effect on the wildlife in the area, let alone the people who live in the ~~area~~ region & those like myself who visit the area on a regular bases.

There has to be a more suitable area for this activity than the Gila Wilderness.

Sincerely
David Clark
La Tierra Box 106 - Buckman Rd
Santa Fe, NM 87501

187

281

VIRGINIA BRAGUE
PO BOX 8070
SANTA FE NM 87504 03PM

Western Union **Mailgram**

4-008402S307 11/03/83 ICS IPMMTZZ CSP NFKC
5059834384 MGM TDMT SANTA FE NM 36 11-03 1042P EST

▶ALTON CHAVIS
TACTICAL AIR COMMAND DEEV
LANGLEY AFB VA 23665

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WE MUST NOT ALLOW MAN'S INVASION BY SONIC BOOM INTO THE GILA AND LEOPOLDO WILDERNESS AREAS. PLEASE MAKE EVERY EFFORT TO HAVE AIRFORCE CONSIDER OTHER ALTERNATIVES; WHITE SANDS, TALEN, MCGREGOR OR THE WIDE OCEAN.
VIRGINIA BRAGUE

282

2347 EST

MGMCOMP MGM

5241 (R 7-82)

TO REPLY BY MAILGRAM MESSAGE, SEE REVERSE SIDE FOR WESTERN UNION'S TOLL - FREE PHONE NUMBERS

SENATOR BINGAMAN
SANTA FE, N.M.

1983 OCT -7 PM 2:48

4 October 1983

2016 Valle Rio
Santa Fe, New Mexico 87501

Senator Jeff Bingaman
US Court House
Santa Fe, NM 87503

Dear Senator Bingaman :

We are adamantly opposed to the US Air Force using the San Francisco Valley as a testing base for supersonic jet training. We know that there are other options available to the Air Force; we are also aware that the Air Force has chosen to ignore the impact of this exercise on the local people. While we are not living there at this phase of our lives, we have every intention of retiring there; in the meantime we use our property as an escape from the activity of Santa Fe.

In 1966, when we were first married, we purchased our little 3½ acre 'ranch' in Pleasanton, Catron County, New Mexico which was to be our retirement home. At that time we were working in Washington, DC and really looked forward to getting back to New Mexico, if only during summer vacations and after retirement. It wasn't until mid-1974 that we were able to find a job here in New Mexico; we have thoroughly enjoyed working in Santa Fe but anticipate the time we can live in a rural community.

2S3

Our first summer here we hired local Glenwood men to tear down the old tar-paper shack that stood on our 'ranch'. The next summer we began construction on what is now a modest, 1400 square foot adobe home; it took us over five years of adding a room at a time and doing our own wiring, plumbing, etc. to reach the point of now having a decent place to live down there. We are also nine years closer to retirement age.

2S3

As we approach the fulfillment of our dream, we now find that our 'ranch' is uninhabitable because the US Air Force has chosen this valley over which to practice supersonic dog fights. It is very hard to believe that an American can work long and hard for a dream only to have it dashed to pieces by government expediency. I feel certain you do not personally condone this violation of our life-long dream.

As our contact with the government, we turn to you to help us resolve this conflict of needs. We strongly feel the need by the Air Force for this valley is questionable and that their use of the valley would make life intolerable for all the people living in the area. Please help us find a way to preserve our retirement home.

Sincerely,

John P. and Claudia L. Hubbard

Dick Manna
120 B Duran St.
Santa Fe, NM 87501

Mr. Alton Chavis
Tactical Air Command/DEEV
Langley AFB, VA 23665

Dear Mr. Chavis,

I am writing to you concerning the renewed plans of the U.S. Air Force to fly super-sonic training flights from Holloman Air Force Base over areas adjacent to the Gila and Aldo Leopold Wilderness Areas in southwestern New Mexico. I believe the Draft Environmental Impact Statement prepared by the Air Force is totally inadequate and does not address the concerns of the people affected by the sonic booms produced by these flights. The Air Force has not even begun to assess the harm that would be caused by these booms, nor have they explored any of the alternative locations which do exist.

My primary objections to the Air Force's plan are as follows:

284 1) The predicted magnitude of the sonic booms would be far in excess of what the EPA has stated to have an adverse effect on human health. 284

285 2) The booms would impact u on large portions of Wilderness Area. The negative impacts of booms on wildlife and wilderness values would be, in my opinion, a serious violation of the Wilderness Act of 1964. The New Mexico State Environmental Improvement Department has publicly concurred with this opinion. 285

286 3) Three other areas (White Sands, Talon, and MacGregor) are available. None of these areas contains significant wildlife or wilderness values, all are unpopulated, and all are considerably closer to Holloman AFB. 286

4) More than enough of our state(over 19%) has allready been appropriated for use by the military. It is time for New Mexicans to draw the line.

Thank you for your consideration of these points. Your support on this issue will be greatly appreciated.

Sincerely,

Dick Manna

1-270

SFMC
SANTA FE MOUNTAIN CENTER
(505) 983-6158

October 24, 1983

U. S. Senator Pete Dominici
4329 Dirksen
Senate Office Building
Washington, D. C. 20510

Dear Senator Dominici:

287 Regarding the U. S. Air Force proposal to fly 300 training flights per month for F-15 pilots from Holloman Air Force base over parts of Catron County and the Gila Wilderness, I am oppossed. I represent a wilderness program which utilizes much of this area as an enclave from the cities. Most of our clients are receiving "therapy" in one form or another and this would be a disturbing intrusion. 287

288 The percussion of the sonic booms will range from 3.7 to 5.5 pounds per square foot. For the sake of comparison, the French Supersonic Transports which were banned in the U. S. had sonic booms of 1.4 pounds per squre foot. I feel that this inordinate sonic boom is totally inconsistent with the purpose of the Gila and Aldo Leopold Wilderness Areas. 288

Sincerely,

ROK

Richard O. Kimball, Ph.D.
Executive Director

ROK:nlm

cc: Alton Chavis ✓
Larry Tackman
Dan Campbell

Route 4, Box 34-C
Santa Fe, New Mexico 87501

October 25, 1983

U. S. Senator Jeff Bingaman
502 Hart Building
Washington, D. C. 20510

Dear Senator Bingaman:

I am opposed to the U. S. Air Force proposal to fly 300 training flights per month for F-15 pilots from Holloman Air Force Base over parts of Catron County and the Gila Wilderness.

This would not only be an intrusion on the wilderness area and a serious threat to wildlife, it also promises to have disturbing effects on the human population that lives in Catron County.

288 The percussion of the sonic booms will range from 3.7 to 5.5 pounds per square foot. For the sake of comparison, the French Supersonic Transports which were banned in the U. S. had sonic booms of 1.4 pounds per square foot. I feel that this inordinate sonic boom is totally inconsistent with the purpose of the Gila and Aldo Leopold Wilderness Areas. 289

Sincerely,

Deborah A. Harris

cc: Alton Chavis ✓
Larry Tackman
Dan Campbell

RICHARD S. CLARK
1204 DON DIEGO AVENUE
SANTA FE, NEW MEXICO 87501

October 27, 1983

Senator Jeff Bingaman
Sen. Hart Building 502
Washington, D. C.
20510

Dear Senator Bingaman:

062 | I consider the Air Force plan to fly supersonic jet aircraft missions over the Gila Wilderness and surrounding areas in southwestern New Mexico to be ill-conceived and damaging to the integrity of one of the few remaining natural areas in the United States. Surely there is no need to destroy the silence and peace which are unique to such areas. Can not the air over White Sands, for instance, be used equally effectively for training purposes? | 290

I urge you to evaluate carefully and fully the consequences of such missions, and take the action you consider appropriate; hopefully, to make an effort to convince the Air Force to alter its plans. The residents (human, animal, and vegetable) within and around the Gila will receive far greater benefits for far longer than any the Air Force could get from its training games, if the land can remain unspoiled.

Sincerely,

Richard S. Clark

137 Mesa Verde
Santa Fe, NM 87501
Oct 26, 1983

Dear Senator Bingaman:

I am writing concerning the air Force's use of Catron Co. and the Gila Wilderness for training flights.

It is my understanding that the air Force wants to fly 300 training flights per month for F-15 pilots from Holomon air Force Base. The sonic booms accompanying those flights will occur approximately 12 times per day at levels of magnitude rarely experienced by humans. They will also occur at lower altitudes than in the past.

Allowing training flights to occur in this area would constitute the first invasion by sonic booms into airspace above a National Forest. It is appalling that these borders may be infringed upon!

The effects of sonic booms of such magnitude upon humans, not to mention wildlife, in the area are not fully known. Some of the side effects include high blood pressure, peptic ulcers, lowered resistance, and change in heart rhythms.

Please consider taking any action you can against this infringement upon our health and our wilderness.

Thank-you!

Sincerely,
Christine Wisner

137 Mesa Verde
Santa Fe, NM 87501
Oct 26, 1983

Dear Alton Chavis:

I am writing to you concerning the use of Catron Co, NM and the Gila Wilderness and National Forest for training F-15 pilots out of Holomon AFB.

I understand that the flights will cause frequent (12 times/day) sonic booms of a greater magnitude than previously experienced by humans on a sustained level. The flights are also to occur at lower altitudes than in the past.

The infringement of the use of air space over a National Forest is appalling! The detrimental effects upon human life and wildlife in the area are not known.

I urge you to seriously consider any alternatives to this plan that don't effect such a populated and popular area. Help us preserve our health and our wilderness!

Thank you, Sincerely,

Christine Wismer

October 28, 1983

Route 4, Box 34-C
Santa Fe, New Mexico 87501

U. S. Senator Jeff Bingaman
502 Hart Building
Washington, D. C. 20510

Dear Senator Bingaman:

293 The Air Force proposal to fly 300 training flights per month over the Gila Wilderness and parts of Catron County is an action I must oppose both professionally and philosophically. As a counselor/outdoor leader for a program which utilizes the wilderness as a therapeutic setting for mental health work, I see the 3.7 to 5.5 pounds per square foot sonic booms as extremely destructive to the outdoor serenity which is crucial for our work with people. 293

As Also Leopold (first proponent of the Gila Wilderness) fought so determinedly for "things simple, wild and free," I must ask you to demonstrate respect and support for New Mexico's great resource--things simple, wild and free.

F-15 jets, flying at the rate of ten flights per day at supersonic speeds far surpassing the 1.4 pounds per square foot booms of French Supersonic Transports banned in the U. S., violate the simplicity of wilderness air space if not the Wilderness Act, itself.

Sincerely yours,

Darl Kolb

cc: Alton Chavis
Larry Tackman
Dan Campbell

Sharman Apt Russell
Route 15, Box 2560
Mimbres, NM 88049

October 24, 1983

To Whom it May Concern:

Although I live over one hundred miles from Reserve, I would like to protest the proposed pilot-training program for that area. My father was Captain Milburn G. Apt, a test-pilot who in 1954 broke a record and crashed in the X-2; subsequently Bell Aircraft and the Air Force helped put me through college. I am hardly opposed to pilots, the Air Force, or pilot-training programs. However, in this case, I feel that the Air Force is acting callously. I understand that it may be a hardship for pilots to train on the weekend in other airspaces; I am sure there is a creative solution to that problem, and it must be remembered that all vocations have hardships and that pilots become pilots voluntarily. The disadvantages must be weighed against a flagrant undermining of our wilderness system and the ill-health and financial ruin faced by citizens in the Reserve area. (If such a program came to our area, my husband and I would be forced to sell our land and home--who would buy it under such conditions?) I do not think the use of the Reserve airspace is necessary. And I believe that the outcome of such a program would be disastrous for all concerned.

294

294

Sincerely yours,

Sharman Russell

MIMBRES CENTER

October 23, 1983

Dear Sirs,

I am writing in response to the resurgence of the Air Force proposal which will inundate Catron County and much of the surrounding Wilderness with Sonic Booms on a regular basis. As manager of the Mimbres Center and a resident of the Mimbres Valley I have had the opportunity to explore a great deal of the wilderness under which these training operations are intended to take place. Both personally and professionally I am gravely disappointed in the government's logic which can assume that these operations could have no affect upon the designated Wilderness ajacent to the proposed area. As an educational outfitter based in the Gila and Aldo Leopold Wilderness Areas, I can state unequivocally that these operations will destroy the wilderness experience of my clients who choose the Gila Wilderness for its remote and pristine nature. The result,of course,of this will be the destruction of my business.

295

While this certainly concerns me, my greater concern is for the Wilderness itself. Designated as deserving protection simply for what exists there without interference by man, this area has survived its protection far better than most given its extreme remoteness. It is this very remoteness which I'm sure has drawn the Air Force to it. Which leaves me to believe that there is indeed no place on earth left sacred for the sake of preserving what does and can exist beyond our influence as the dominant species. It is impossible for me to believe that the wildlife of the area- bear, elk, eagles, peregrines, bighorn, etc.- could remain uneffected when I remember my own experiences with sonic booms and then consider the numbers and magnitude of this proposal.

295

Others will speak for themselves (as there is certainly detrimental effect on humans, not to mention their cattle), but the Wilderness has no voice of its own and deserves to be represented; indeed this representation was guaranteed the Gila in 1924 by the Federal Government. So I ask you listen to the people who use it as it was intended to be used, as undisturbed Wilderness; and fight to defeat this proposal which will most certainly disturb it. Other areas are far more suited for such exercises (White Sands, McGregor, Talon) saving the tax-payers money in flight time as well as saving the Wilderness. Alternatives do exist and should be explored; a true Wilderness is too valuable to waste simply out of convienence.

Sincerely,

Ben Dobbin

Route 15 Box 2500 San Lorenzo, New Mexico 88059
(505) 534-9547

October 24, 1983

Mr. Alton Chavis
Tactical Air Command/DEEV
Langley Air Force Base, Va. 23665

Dear Sir:

With regard to the F-15 training flights over Catron County and the Gila Forest and adjoining Gila Wilderness area, and your department's proposal to increase such flights, I strongly oppose such proposal, not only for quite personal reasons, but for very basic humanitarian reasons as well.

I became personally concerned about the impact of a sonic boom not long ago while hiking and enjoying the quiet solitude that the Gila country offers when a severe blast actually brought me down to my knees with a fearful reflex action. After regaining normal metabolic rates and feeling the accompanying adrenalin rush subside, I had cause to wonder about the effect upon the health of not only myself and others, but also that of the wildlife in the area, that sustained exposure to these booms might have.

The Catron County area of New Mexico, whether it be National Forest lands, Wilderness area or private land is one of those rare places where one may expect to find a satisfying degree of tranquility. It has been that way for ages, thanks partially to past legislation, and in view of the rapidly diminishing existence of such places there should be great care taken to assure that we preserve those qualities that are valuable not only to the relatively few residents of the area but also to the substantial number of people who find cause to use the area from throughout the United States.

296

Considering the other alternatives your department has for the training flights, it appears that perhaps you should put politics aside and take a hard look at some of the more basic issues at hand....namely, those of violating the rights of humans and wildlife alike. This letter is primarily of a personal nature, but legally speaking I suspect your proposal encroaches upon both individual rights and the spirit of the Wilderness Act.

296

I appeal to your sensitivities as a fellow human being and decision-maker in this country, and respectfully suggest that the F-15 training flights be conducted at a site more appropriate and compatible than the proposed Catron County area....a special place to many people where certain ecological balances are already hanging by a thread.

Sincerely yours,

Jeffrey R. Ray

Jeffrey R. Ray
Box 217
Bayard, NM 88023

Copies:
U.S. Senator Pete Dominici
N.M. Governor Toney Anaya
U.S. Senator Jeff Bingaman
Mr. Larry Tackman, Coordinator

1021 Pate St.
Carlsbad, N.M. 88220
August 21, 1983

HQ TAC/DEEV
Langley AFB, Virginia 23665
Attention: Mr. Alton Chavis

Dear Sir:

I have just seen a copy of the environmental impact statement relating to the proposed supersonic training activity planned within the Reserve, N.M.,MOA. I would like to register another vote in the negative on this proposal. I was not aware of this EIS or the public hearing of Oct. 2-3, 1979, otherwise I would have responded long ago.

I was born and raised on a ranch at Apache Creek, N.M. and still own a home there. This area is near the center of the planned supersonic test area and, in fact, I have heard several sonic booms during short visits to the area over the past several years. After thirty years of teaching in the public schools here, with the attendant pressures and stress of the schoolroom today, I have been looking forward to retirement next year and a return to Apache Creek with its peacefulness and serenity. Needless to say, I am not overjoyed to learn that this tranquil atmosphere is apt to be subjected to as many as 12 sonic booms per day.

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As a former serviceman, I am well aware of the need for the finest, up-to-date training if our armed forces are to accomplish their missions. I am also more than willing to bear my fair share of the cost and hardships needed to provide this because I would not want our men to go into combat without the tools and training they need. However, I do not believe that the people of this area should be forced to have their quality of life seriously deteriorated when other options are available.

Since recent revelations in the press have shown that the Defense Department is guilty of horrendous neglect in military purchasing, etc., I believe that the money needed to conduct supersonic training over the ocean can be found. This would be my first alternative suggestion. If this is not practical, I suggest that the entire state of New Mexico be declared a supersonic MOA. After one gigantic EIS hearing, the Air Force can then fly their missions one day on each degree of the compass from Holloman AFB. In this way all the residents of our state can share the burden as we all share the benefit of the hundreds of millions of dollars spent by the DOD in our state. Fair is fair!

cc: Sen. Pete Domenici
Sen. Jeff Bingaman
Rep. Manuel Lujan
Rep. Joe Skeen
Gov. Tony Anaya

Sincerely,
Gene Porter
Eugene A. Porter

1406 W. Thomas
Carlsbad, NM 88220
August 26, 1983

HG Tac/DEEV
Langley AFB, Virginia 23665

Attention: Mr Alton Chavis

Dear Sir:

This letter is to protest the use of the Reserve Military Operations Area for Supersonic Flight Operations.

I've read the Draft Enviornmental Impact Statement and find nothing there that assures me that the quality of life in that area won't be greatly degraded with noise and air pollution. There are occasional sonic booms there now, and the pilots who train there now yield to the temptation to buzz the little town every once in a while. I suppose they know we would never find out where to report them, or to whom. Just think what it will be like with 300 or 600 sorties a month added! To say nothing of the sonic booms!

298 The illustration shown in Figure 4 on page D-30 frightens me! Will the pilots fly in the configuration they are supposed to, or will they wander all over the MOA. I'm afraid I agree with Bob White, Director of the New Mexico State Transportation Department in the 4th paragraph of his letter on page 10-40. If the pilots are encouraged to ignore the airspeed indicator, won't they also be likely to ignore the altimeter? Or the boundary of the elipse in which the booms are supposed to occur? Your credibility is low as to pilot self-discipline. 298

I implore you to find an alternative to using the Reserve MOA for Supersonic Flight Operations. The fact that there are only a few people there to complain is not a valid reason for using it. Neither is the lower cost. As alternatives
299 I suggest: 1. Cut the number of training missions to those that can be flown at White Sands; 2. Use White Sands on weekends; or 3. Use areas over the ocean. 299

cc: Gov. Tony Anaya
Sen. Pete Domenici
Sen. Jeff Bingaman
Rep. Manuel Lujan
Rep. Joe Skeen
Chairman, Catron
County Commissioners

Sincerely,

Lois M. Harvey

Lois M. Harvey
Property Owner
Village of Reserve

The First Presbyterian Church
P. O. BOX 39 . CARLSBAD, NEW MEXICO 38220
EARL S. HARVEY, PASTOR -- CHURCH PHONE 885-2715

August 26, 1983

Hqt TAC DEEV
Attn: Mr. Alton Chavis
Langley Air Force Base
Virginia

Dear Sir:

I have just reviewed the Revised Draft Environmental Inpact Statement concerning the proposed supersonic flight operations in the Reserve Military Operations Area.

My first impression is that the Revised Draft does not in any way adequately answer the questions and objection raised by the New Mexico Health and Environmental Department and others presented in your first draft. My second impression is that the research that you have done to answer the original objections is most inconclusive. What I am saying here is that you can get just as much professional and scientific data that will refute or call into question the data you have presented by professional and expert opinion. It's very much like the John Hinkley case in his trial for the attempted assasination of the President, very well trained and disciplined persons in the practice of psychiatric medicine differed sharply on the sanity or insanity of Mr. Hinkley, all using the same data. So it is in this environmental impact study. The bottom line being the ones who have the most influence will be the ones who will win the case, not whether it is just or healthy or fully scientifically supported. When you are dealing with the human element in anything I realize you can't always measure everything by the scientific approach because we are more than machines and our motives are devious and mixed, always looking out for our own interests first.

I guess my biggest concern in this debate is the subtle and unspoken assumptions of placing costs above persons, and protecting Federal Lands and Wilderness areas above the well being of people. Another assumption that in no way has been proven or adequately addressed is that it is actually necessary to have as much practice as the Air Force contends it must to equip its pilots. In our rapidly expanding space age it occurs to me that shortly all manned aircraft will be obsolete.

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In the light of these disturbing factors, I am registering my objections to the proposal.

cc: Gov. Toney Anaya
Sen. Pete Dominici Sen. Jeff Bingaman
Rep. Joseph Skeen Rep. Manual Lujan
Rep. Bill Richardson
Catron County Commissioners
N. M. State Environmental Office

Sincerely,

Earl S. Harvey

Earl S. Harvey

J. C. Ogilvie
P. O. Box 30
Monticello, New Mexico
87939

PERSONAL/CONFIDENTIAL

August 13, 1984

Hon. Jeff Bingaman
United States Senator
U.S. Senate Office Building
Washington, D.C. 20510

Dear Jeff:

We understand from local papers and radio news accounts that the Gila National Forest has been picked as the site for greatly increased training flights of super sonic planes.

Please see if you can do anything to stop the Army(?) from using the Gila for training flights of the super sonic planes. Now every time a plane breaks the sound barrier over the Gila (soon to be many times a day, five days per week), the heart pounds, adobe falls.

301 Why can't they fly over utterly deserted White Sands or, with an extra twenty minutes flying time, they would be over the Caribbean where the fish are protected by a liquid blanket. 301

Please keep me posted as to what the Army and/or Air Force has to say as regards the subject of this letter - ¡POR FAVOR!

And anyway, isn't it about time that the rest of the United States stopped using New Mexico as a dumping ground for nuclear waste and a backdrop for the bouncing off of sonic booms?

Sincerely yours,

J. C. Ogilvie

JCO/k

IRBY CONSTRUCTION CO.

August 15, 1983

Department of the Air Force
Office of the Assistant Secretary
Headquarters Tactical Air Command/DEEV
Langley AFB, VA 23665

ATTN: John O. Rittenhouse
Deputy Assistant Secretary of the Air Force

Gentlemen:

In reference to your proposed supersonic flight operations in the Reserve Military Operating Area (MOA), we would like to go on record that we are presently conducting helicopter operations and foundation digging and blasting operations in this area and can see a very serious and dangerous conflict developing if the above Air Force operation is carried out at this time.

We are presently under contract with Tucson Electric Power Company, 220 West Sixth Street, Tucson, Arizona, to construct 111.25 miles of 345 KV steel power line with a completion date of April 1, 1985.

We are enclosing a line map of the general area for your information.

Yours very truly,

IRBY CONSTRUCTION COMPANY

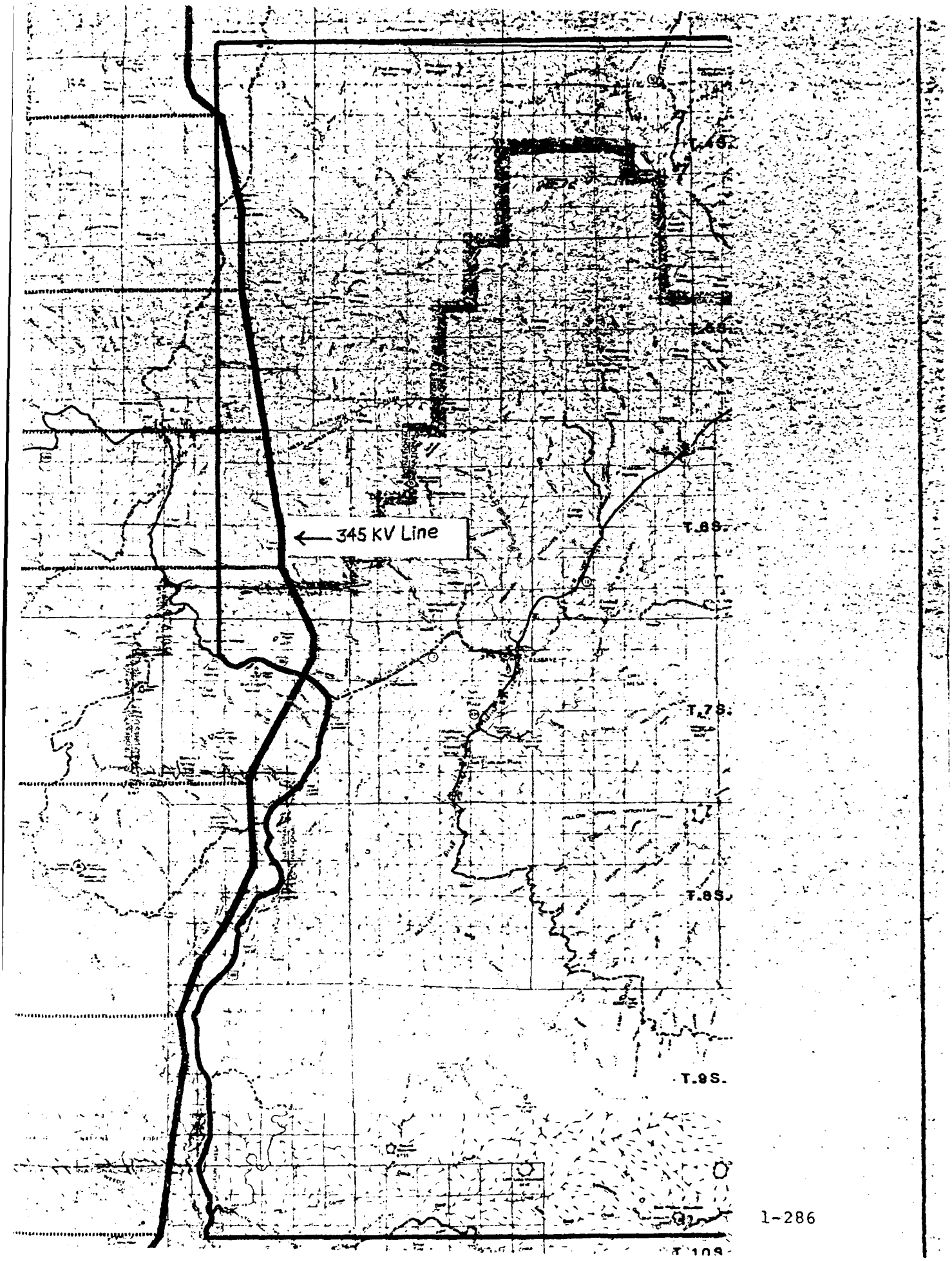
Melvin W. McCormack
Operations Engineer

MWMc:lam

Enclosure

cc: L. Wilhelm, T.E.P.
R. Krudup, T.E.P.
M. Dietz, T.E.P.
C. Irby, Irby Construction

817 SOUTH STATE STREET P.O. BOX 1819 JACKSON, MS 39205 [illegible]


345 KV Line
T.8S.
T.8S.
T.9S.
T.9S.

Tucson Electric Power Company

220 West Sixth Street, Post Office Box 711
Tucson, Arizona 85702

Area Code 602
Telephone 622-6661

September 6, 1983

Department of the Air Force
Office of the Assistant Secretary
Headquarters Tactical Air Command/DEEV
Langley AFB, VA 23665

ATTN: John O. Rittenhouse
Deputy Assistant Secretary of the Air Force

Gentlemen:

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As a follow-up to the letter of August 15, 1983, sent by the IRBY Construction Company to the Department of the Air Force, Tucson Electric Power Company would also like to go on record that we foresee a hazardous and dangerous conflict developing if the Air Force carries out supersonic flight operations in the Reserve Military Operating Area (MOA) at this time. Specifically, in conjunction with the construction of our second 345 kV transmission line extending from the Springerville area to the Vail Substation near Tucson, we currently have substantial helicopter and foundation blasting operations in the area between our Springerville and Greenlee Substations. Conflicts could develop if your proposed supersonic flights take place in proximity to either of these operations.

For your information we have enclosed a copy of the IRBY letter along with a map showing the current location of our construction activities.

In addition, we would also advise you that TEP conducts periodic aerial surveillance of this 345 kV line. The timing of such aerial activities depends upon specific system requirements and the next one scheduled for this line segment will be sometime in October 1983.

TEP would be willing to contact the U. S. Air Force prior to our surveillance activities. Should you desire such information, please advise us at your earliest convenience as well as whom to contact.

If you have any additional questions or need for further information, please contact me at 745-3355 or Robert Krudup at 745-3341.

303

Sincerely,

L. H. Wilhelm REK

L. H. Wilhelm
Manager, Civil Structural
and Transmission Engineering

LHW:ra
Enclosures
cc: D. Bock - TEP
M. Dietz - TEP
R. Krudup - TEP
H. Smith - TEP
C. Irby - Irby Construction

IRBY CONSTRUCTION CO.

August 15, 1983

Department of the Air Force
Office of the Assistant Secretary
Headquarters Tactical Air Command/DEEV
Langley AFB, VA 23665

ATTN: John O. Rittenhouse
Deputy Assistant Secretary of the Air Force

Gentlemen:

In reference to your proposed supersonic flight operations in the Reserve Military Operating Area (MOA), we would like to go on record that we are presently conducting helicopter operations and foundation digging and blasting operations in this area and can see a very serious and dangerous conflict developing if the above Air Force operation is carried out at this time.

We are presently under contract with Tucson Electric Power Company, 220 West Sixth Street, Tucson, Arizona, to construct 111.25 miles of 345 KV steel power line with a completion date of April 1, 1985.

We are enclosing a line map of the general area for your information.

Yours very truly,

IRBY CONSTRUCTION COMPANY

Melvin W. McCormack
Operations Engineer

MWMc:lam

Enclosure

cc: L. Wilhelm, T.E.P. ✓
R. Krudup, T.E.P.
M. Dietz, T.E.P.
C. Irby, Irby Construction

Box 583
Bolinas CA 94924

October 24, 1983

Mr. Alton Chavis
Tactical Command/DEEV
Langley AFB VA 23665

Dear Mr. Chavis:

You may find it odd that a resident of California is writing to you about a situation in New Mexico, so let me state my reasons for involving myself in this matter:

1) At one time I did live in New Mexico, and found it to be exceptional for its solitude, wildlife and vast wilderness areas.

2) I have friends who still live there, I visit them occasionally, we all have small children and look forward to raising healthy families in a peaceful environment.

3) Wilderness areas, whether in New Mexico, California or Alaska for that matter, are so designated because enough people consider them special enough to be protected from the intrusions of modern man -- whether on land or in the air.

304 The prospect of sonic booms over Catron County and the Gila Wilderness, ranging from 3 to 25 psf, is appalling and totally unacceptable. I believe that such an occurence would violate the spirit of the Wilderness Act, the intent of Congress regarding wilderness protection, and the rights of those who live in the area. 304

I urge you to explore alternatives, whether in choice of the actual areas for such overflights, or in scheduling of the flights themselves.

Sincerely,

Laurie McCann

Laurie McCann

cc: Senator Pete Domenici
Senator Jeff Bingham
Governor Toney Anaya
Larry Tackman

Federico Astiz
670 Caudill
San Luis Obispo, California

October 25, 1983

U.S. Senator Jeff Bingaman
502 Hart Building
Washington, D.C. 20510

Dear Senator,

I am writing to you in the hope that I can communicate my feelings and those of my colleagues and students.

We would like you to support us in finding an alternative solution and different training area for the Air Force's intention to conduct F-15 training maneuvers out of Hollomon AFB, over Catron County and the Gila.

305 As you may be well aware, the magnitude of the F-15 sonic booms is on the average of three times greater than that of the french SST (which were prohibited from entering the U.S.) and at least four times greater than what the E.P.A. considers the limit before they adversely affect human health. 305

306 At an altitude of 40,000 feet, and at mach 1.4, the lateral spread of a sonic boom may be as much as 14 miles from the aircrafts path. Each boom can affect an area of 28 square miles. As a result, an F-15 flying along the 40 mile boundary of the flight corridor could impact about 369 square miles of legally protected wilderness (included in this area would be parts of the Gila Wilderness and the San Francisco river basin to the south). 306

307 The effects of this intrusion into human and wild life can adversely create irreversible damage. Much in the same way than that of a stick of dynamite detonating inadvertely 12 times a day in your back yard. Eventually, over time, the organism loses its ability to appropriately react and cumulative damage results. The continued exposure to this type of auditory stress leads to changed heart rythms, high blood pressure, peptic ulcers, lowered resistence. To expect the human population of the area to aquiescence to suffering the physiological and psychological effects of this type of activity is inhuman as well as unconstitutional. New Mexico has already contributed over 19% of the state to the military. I urge you to support and cooperate with human and wild life directly affected by the Air Force proposal and that alternative solutions, and the use of other training areas be looked into in depth in order to avoid a tragic interference with life and human rights. 307

Sincerely,

October 24, 1983
Rt. 4, Box 166 C
Columbia, Missouri 65201

Mr. Alton Chavis
Hq. TAC/DEEV/EIS
Langely Air Force Base
Virginia 23665

Dear Mr. Chavis,

We would like to have this letter included as part of the Environmental Impact Statement for increased supersonic flight operations in the Reserve Military Operations Area. We have long experience in the area included in the Reserve MOA working on fire lookouts in the Apache and Gila National Forests between 1967 and 1974. Since that time we have made frequent visits to the area to camp, to fish, and to visit friends. On our last trip to Glenwood, New Mexico, the whole town was shaken by a loud sonic boom. When we asked some friends about the legality of supersonic overflights, we were surprised to hear that there was a proposal for even more supersonic overflights.

We would like to object to the use of this area for several reasons. First, this is a highly scenic area rich in recreational and natural resources. It includes part of two highly used National Forests and is bounded by two Wilderness Areas. As long-term recreational users of this area we believe that the magnitude and frequency of supersonic overflights and the resulting sonic booms will greatly lower the attractiveness and concomitantly the use of the area by hunters, fishermen, campers, hikers, and other outdoor recreational users that seek undisturbed peace and tranquility. 308 308

Second, we believe that the reduced attractiveness of the area caused by the frequency and magnitude of sonic booms will result in a loss of income by commercial enterprises in and adjacent to the area due to reduced visitation by outside recreational users. Since revenues from outside users represent a major portion of the economy of this region we believe this potentially adverse effect would heavily impact the overall economy, tax income, and revenue base of an area larger than that immediately impacted by the sonic booms. 309 309

Third, we believe that the potential adverse effects on wildlife resources has been very poorly assessed. There are

three published documents on the potential and actual detrimental effects on wildlife of noise in general and sonic booms in particular. These publications are available to the general public, and while it is not the intention of this letter to summarize in total the findings of the publications, they do include evidence that sonic booms have been implicated in severe reproductive failures of condors, sooty terns, and pelicans. Noise generated by propane gas cannons, similar to sonic booms, is frequently used by fish and game management personnel to make agricultural areas uninhabitable by migratory water fowl. This evidence strongly suggests that sonic booms have the potential to interrupt the breeding cycles of sensitive birds, such as the bald eagle and peregrine falcon. The study cited in EIS by Ellis does not nearly approach the frequency of sonic booms projected in the Reserve MOA. Using a study such as this and projecting safety levels at higher frequency of occurrences would be similar to the FDA or EPA testing drugs or toxic chemicals at one level and then approving them at several times the level or frequency as safe to use, and we do not believe that safety limits are determined in that fashion. We think the literature quite clearly demonstrates actual detriment to wildlife as well as potential effects due to repeated impact by sonic booms. Because of the potential for breeding by bald eagles and peregrine falcons in this area we think that a reevaluation of allowing supersonic flights should be made to determine if levels and frequencies of sonic booms would disrupt existing raptor breeding or prevent the reestablishment of breeding sites.

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We believe increased supersonic flight operations in the Reserve MOA should not be authorized until the possibly numerous adverse effects of sonic booms are more carefully assessed.

Sincerely,

Terence P. Boyle Ph.D.

Susan C. Boyle Ph.D.

References

Fletcher, John L. and Busnel, R. G., eds. 1978. Effects of Noise on Wildlife. New York.

U. S. Environmental Protection Agency. 1971. Effects of Noise on Wildlife and Other Animals. Office of Noise Abatement and Control. NTID300.5

U. S. Environmental Protection Agency. 1980. Effects of Noise on Wildlife and Other Animals: Review of Research Since 1971. Office of Noise Abatement and Control. EPA 550/9-80-100

October 24, 1983

Senator Jeff Bingaman
502 Hart Senate Office Building
Washington, D. C. 20510

Dear Senator Bingaman:

My parents live in a rural area of southwestern New Mexico, Catron County, where the Air Force is proposing to conduct supersonic simulated aerial combat over populated areas. I have studied the literature they have sent me on the pros and cons of the subject and I am concerned on several counts. It appears to me that the effects of frequent sonic booms of varying intensity on human beings, especially older people, is very uncertain, and I strongly protest using any people as guinea pigs without their consent. My parents are as patriotic as anyone, but I know that they are not at all convinced that this Air Force proposal is really necessary for the national defense. They do not believe that there is no alternative scheme that will not impact non-consenting human beings.

312 The question of allowing sonic booms over human populations is a national one, and should be so addressed. 312

I would appreciate it if you would add my protest to the hundreds or thousands I know you are receiving.

Sincerely,

Geoffrey H. McKnight
Box 437
Belgrade, Montana 59714

cc: Senator Max Baucus of Montana

October 25, 1983

Senator Jeff Bingaman
502 Hart Senate Office Bldg.
Washington, D C

Dear Senator Bingaman,

I have just recently learned of the request made by the Air Force to use the area over Glenwood, Reserve and the Gila Mountain and Wilderness Area in Western New Mexico as supersonic Training air space.

313 I visited the area several times many years ago with my son and daughter-in-law who even that long ago expressed a desire to live there amongst those peaceful mountains and abundant wildlife, and invited me to come join them whenever they were able to realize that dream. They have at last invested everything they have to relocate from Texas to Glenwood to raise Thoroughbred horses and I am making my plans to join them, for my past history of high blood pressure and a very strenuous life demands that I keep myself in a calm state of mind. The beauty and serenity of those mountains will be a perfect surrounding for me to achieve the calm I need while taking quiet walks and renewing my love of oil painting. 313

The sonic booms which would constantly shatter that peaceful tranquility would completely ruin this whole family's plans of many years, as I am sure it would also be devastating to the many many people who have chosen to live and work there all their lives. People and livestock as well as wildlife in the forest cannot withstand the kind of stress which the booms would place upon them, and an area with so many of each should not have to be subjected to it.

That area was set aside many many years ago to preserve it's great beauty and provide home for wildlife, and as a place where people can go to relax and recover, even if for a short time, from the frantic pace of city life. It would be a travesty to ruin all this with the sonic booms which would be produced by using that air space for the supersonic training.

There surely must be some other air space available in this great country of ours, that would not be so adversely affected by the sonic booms.

Sincerely,

Gaile V Bekken

Gaile V. Bekken
9947 Olde Eight Rd.
Northfield, Ohio 44067

October 25, 1983

Senator Jeff Bingaman
502 Hart Senate Office Bldg.
Washington, D C

Dear Senator Bingaman,

I have been formulating long range plans for some time now to relocate my Thoroughbred horse business to the southwest to join with my brother and sister-in-law and their small operation in the same business. They have recently enacted a many years' long dream of moving themselves and their Thoroughbred brood mares to Glenwood, New Mexico where the peace and calm of those mountains and meadows nearby will provide an excellent place to establish a successful horse farm. Our mother has been making plans to join them there as well for the benefit of the tranquility, serenity and beauty that all four of us yearn for.

I understand the Air Force has made requests to use the air space over the Reserve-Glenwood area for staging training flights at supersonic speeds. The sonic booms these flights would create would totally annihilate all these plans this family has made, and since my brother and his wife have already invested everything to settle there, they would be ruined. Their two brood mares are in foal now, and would surely lose their valuable foals if they were subjected to the earth-shaking, nerve-shattering noises these booms would produce. The foals from their mares and my own mares there in the future are to be the product of our business. We would have no product to sell or develop for racing if this is allowed to occur, and without a product a business cannot survive. Each of us would be made totally miserable as well for the calm, quiet beauty of that area is what draws us there.

Also, I cannot help thinking of the many many families who have lived there for years, raising cattle, goats and other livestock, and of the great numbers of wildlife in those lovely mountains and wilderness area. All who are subjected to a jolting disturbance such as this would be under a constant torment from the stress of such conditions. There are not many areas left where people can go for peace and calm, surrounded by such natural beauty.

I would certainly hope the Air Force can find some other air space where they can conduct their training and not cause so much damage as it would there.

Sincerely,
Bunny Bekken
Bunny Bekken
9947 Olde Eight Rd.
Northfield, Ohio 44067

740 Tepic
El Paso, Texas
79912
October 17, 1983

HQ TAC/DEEV
Attn: Mr. Alton Chavis
Langley AFB, VA 23665

Dear Sir:

This letter contains my formal objections to selected material contained within the Revised Draft EIS's for the Valentine MOA and the Reserve MOA. This letter is to become a part of the permanent record for both documents and is to be included in any final or revised EIS's for those areas.

315

In both EIS's it is alleged that the Worthington health effects paper represents "worst-case." This is not true for the following reasons:

1. With the limited time and library resources available to me I was only able to review about half of the literature published up to 1978 linking loud noise exposure to adverse health effects.
2. The Worthington report is now over five years old. With the recent information explosion in the area of noise pollution and health at least 100 more studies have been published that the Air Force has not bothered to examine.

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In order for the Air Force to meet its responsibilities under NEPA to properly represent "worst-case" the following must be done:

1. Review the studies that were not available to Worthington. (Perhaps 50 studies.)
2. Review the relevant recent studies (1978-1983). I would estimate that about 100 more studies are now in the literature.
3. List all studies reviewed in a comprehensive bibliography so that the completeness of the analysis can be evaluated.
4. Provide a revised summary of findings.

316

The failure of the Air Force to go beyond the efforts of Worthington is inexcusable. To represent the Worthington study as worst-case is misrepresentation for the reasons stated above. This is one more example of how these draft EIS's fail to meet the objectives of NEPA.

Sincerely yours,

Richard D. Worthington

Richard D. Worthington, Ph.D.
Associate Professor of Biological Sciences

cc: selected opposing groups.

BAYLOR UNIVERSITY
DEPARTMENT OF BIOLOGY
Waco, Texas 76798

October 25, 1983

Mr. Alton Chavis
Tactical Air Command/EEVE
Langley AFB, Virginia 23665

Dear Mr. Chavis,

Please register this letter in strong opposition to your new plan for training maneuvers, which make sonic booms, in air space near the Gila Wilderness Area, Gila National Forest, the nearby residential areas in Glenwood and Reserve, New Mexico, plus the critically important natural riparian area of the San Francisco River.

317

I really don't see any rational or logical reason why you picked this asthetically, scientifically, and culturally unique area with its unparalleled biotic and archaeological resources. The harm done to modern, historic, and prehistoric structures, to native plants and animals, much less to the citizens of that region of New Mexico, simply has never been adequately assessed. This latter fact, plus the tremendous value of all of the resources of the region mitigate strongly against your choice.

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Lest you think that I am writing merely because the Glenwood and Reserve folks asked me too, since I have considerable biological field experience in the region, please remember that I have similar experience in the aerial gunnery range of southwestern Arizona, so I can personally attest to the psychological and (likely) physical stress caused by sonic booms on bighorn sheep and similar wildlife resources there, not to mention my personal stress. Please understand that I know what I am talking about, and, indeed, have even published a book briefly mentioning these experiences.

318

I am unalterably opposed to your present plan.

Sincerely,

F.R. Gehlbach

Frederick R. Gehlbach
Professor of Biology and Environmental Studies

FRG:lae

cc: Governor Toney Anaya
U.S. Senator Jeff Bingaman
U.S. Senator Pete Dominici
Mr. Larry Tackman

P 1 of 3

4 NOV 83

James K Lidderdale
P O Box 1324
Blanding, UT 84511

HQ TAC/DEEV
LANGley AFB, VA 23665

Comments on the Revised Draft EIS (RDEIS)
Reserve MOA

In 1979 I, representing the New Mexico Environmental Improvement Division Noise Program, made comments to the record on the Reserve DEIS. Those comments were not adequately responded to in the RDEIS. Technically misleading and inaccurate statements abound in the RDEIS. Graphs and charts used do not correlate and still are not all to scale.

Noise impacts are limited to one average ellipse area yet the Oceana data clearly shows impacts will occur over a greater area. The statistics used in RDEIS need to reflect the greater impact area. Because only one ellipse area can be used, the number of audible booms and focused booms reaching the ground will continually affect the same people and property. Adjustments on noise impacts will need to be made to reflect the percentages of highly annoyed people and the percentages of annoyed people should be presented also with the changes in percentages for now as well as 5, 10 & 20 years from now. The RDEIS does not show estimates for population changes and use in the future nor does the RDEIS state the duration of time the use is requested nor does the RDEIS show impacts for all aircraft using the area.

Noise descriptors used are not valid in the RDEIS application on noise impacts on people in remote areas. Low criteria such as HUD, EPA, Oceana and EPA rural community are not interchangable and do not even

for the same equation of weighting in decibels. Any conclusions reached on actual impacts based on Ldn in the RDEIS is invalid until significance and perception of the Ldn descriptor is made by the RDEIS. Assumptions that are made on Ldn of 40-47 is typical of the impact area without any actual in-the-field testing in the proposed impact area. Other remote area noise measurements suggest much lower Ldn levels occur. The relationship between the very low ambient noise levels and the very high sonic boom levels is not presented in impact on humans yet such criteria is found within the referenced documents in the RDEIS. The referenced documents contain criteria on impacts based on an increase in Ldn yet the RDEIS does not reflect the incremental increase in Ldn caused by the proposed action nor the existing Ldn level.

The impact area will clearly be much greater than the ellipse area shown yet these impacts are not shown. Physical and audible encroachment will occur in the Gila Wilderness Area and other areas near the ellipse and borders of the Reserve Mod are determined by statements in the RDEIS. Objective criteria and evidence is not presented that shows such encroachment will not interfere with the intended uses of the noise sensitive areas near the MOA. Agencies responsible for the noise sensitive areas need to have full disclosure of actual impacts expressed in objective terms using noise criteria rather than subjective descriptions that no impact will occur. Actual overpressures and changes in Ldn should be presented.

Noise impacts as presented in the RDEIS are equally unclear, misleading and invalid as the DEIS. The RDEIS does not contain sufficient information to determine what noise impacts may be present nor which population or area may be impacted.

The attitude surveys on noise referenced in the RDEIS did not use statistically valid testing methodologies nor valid survey techniques. All conclusions based on the surveys referenced must be suspect and evaluated for correct application to be valid for use to determine impacts in the remote areas of the Reserve MOA.

My comments on the DEIS dated 16 OCT 79 still stand and have not been answered in the text revisions in chapters 3 & 4. In fact, the RDEIS has presented more yet ~~inaccuracies~~ technically inaccurate noise information and analysis than the DEIS. The noise criteria and evaluation as presented in the RDEIS does not apply to any specific site and as adapted to the Reserve MOA is inappropiate and incorrect.

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James K. Libberton
James K. Libberton
PO Box 1374
Blanding, UT 84511

Russell Bezette
P.O. Box 496
Laverkin, Utah 84745

October 29, 1983

Mr. Alton Chavis
Tactical Air Command/DEEV
Langley AFB, Virginia 23665

Dear Mr. Chavis,

I am a former resident of Pleasanton, New Mexico. I moved to Catron County because of the peace and quiet that once abounded there. My wife and I left the area because we could not tollerate being scared out of our wits frequently by sonic booms. The sonic booms we were receiving in the pristine valley of Pleasanton were not of the magnitude of those proposed for the super sonic flight training exercises over Catron County, but they were louder than I could tolerate. I would not live in an area where the population was subjected to this kind of abuse. I feel very strongly against the proposal and feel I have good reason to.

I prefer not to go into specific details concerning the adverse health effects suffered by my wife or the stress I went thru during that time. However the case has been made clear as to what happens to the human system when exposed to shock waves as loud as the ones the Air Force intends to submit the residents of Catron County, indefinately.

I would like the Air Force to understand that I am not against any form of military training exercises, providing the health and safety of the American public exposed to such maneuvers has been adequately assessed. The Air Force has not shown these shock waves to be harmless. The evidence tends to lead one to the contrary.

As far as I am concerned, the DEIS is not a true scientific document. It is contradictory to itself, and does not properly address several important areas of public concern. Also, the Air Force has alternative areas to do this kind of combat training.

328 Again I must state, it is clear and obvious, and documented with past research that the health and safety of at least some of the residents of Catron County could be adversly affected. 328

Therefore, I believe, the Air Force should not expose unwilling citizens to sonic boom overpressures.

Sincerely,
Russell J Bezette

cc: U.S. Senator Pete Dominici
Governor Toney Anaya
U.S. Senator Jeff Bingaman
Mr. Larry Tackman

Joya Bezette
P.O. Box 496
La Verkin, Utah
94745

October 30, 1983

Mr. Alton Chavis
Tactical Air Command/DEEV
Langley, AFB, Virginia
23665

Sir;

For seven years I lived with my husband in Pleasanton, Catron County, New Mexico. We were subjected to the United States Air Force's sonic booms, enormous booms from the SR-71, and dog fights over our work place and home. The Air Force also submitted a weak proposal to sonic boom us even more, which would create a life unbearable to the inhabitants and visitors to the Catron County area.

For several years we lived with the most terrible sounds I have ever heard. I suffered greatly from it, and because I could not live with the terrorism, chose to move to a more quiet area.

And now I learn that the United States Air Force proposes yet another weak and inadequate proposal to bombard Catron County with obstructing booms. I cannot believe the USAF refuses to properly address the true consequences of these actions. It is unAmerican. It is immoral.

Many times in the past I have asked...I hope this time you will hear me. Please do not sonic boom Catron County.

Sincerly,
Joya Bezette

Joya Bezette

cc: U.S. Senator Pete Domenici
Governor Toney Anaya
U.S. Senator Jeff Bingaman
Mr. Larry Tackman, local coordinator

652 So. 1200 East
Salt Lake City, Utah
84102

October 22, 1983

Dear Sirs,

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I am writing in response to the Air Force's proposal of testing sonic booms in the Gila Wilderness. I am outraged that this is being considered in a wilderness environment.

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I have spent my last few summers in the Gila Wilderness. It is a very special wilderness area that is the home of many wild creatures. My main purpose in ~~spending~~ so much time in the Gila Wilderness has ~~been~~ because of my interest in working with people in such a beautiful environment. I have worked for Outward Bound, the Santa Fe Mountain Center, and various local programs in this area. We use the wilderness as an alternative to urban life to try new ways of learning and experiencing life. These programs focus on personal growth and awareness. If the Air Force persists in their plans to test sonic booms in the Gila it will make it impossible for such programs to exist. Of course, the wildlife can't testify to the impact this program will have on their existence!

Please oppose this program in the Gila Wilderness. There are places where the impact wouldn't be so great. Because of the Gila's isolated position it is a wilderness that should be even more carefully protected!

Barb Babbow

QUESTIONS AND COMMENTS

regarding the

REVISED DRAFT ENVIRONMENTAL IMPACT STATEMENTS

FOR SUPERSONIC FLIGHT OPERATIONS

IN THE RESERVE AND VALENTINE MILITARY OPERATIONS AREAS

(Produced by the Air Force

July, 1983)

Submitted by

Richard Bargen, M.D.,

Box 1445,

Fallon, Nevada,

89406.

Due to the great similarity of the Revised Draft Environmental Impact Statements issued for proposed supersonic flight operations in Roswell and Gila/Tularosa/Valentine Military Operating Areas, the following comments and questions are submitted for incorporation in the Final Environmental Impact Statements for both areas.

The page numbers, unless specifically noted, refer to the document entitled "Revised Draft Environmental Impact Statement....Reserve Military Operations Area, Holloman Air Force Base, New Mexico."

Due to the small amount of time available for comment on these major proposals, the following comments and questions are focused on a few critical areas of both RDEIS's.

SUMMARY

The fact that a Revised DEIS was prepared for the Air Force's proposal indicates compliance with #1502.9(a) of the "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act". This section states, in part...."If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion."

It is appropriate to note that in this case the entire first 'draft' was revised. The present document, although extensively altered, suffers fatal flaws which render it unable, legally, scientifically and ethically, to form or represent the basis for a final environmental impact statement on the proposal. Hopefully, even though this comment is written hastely in the early morning hours, the data which will be presented, and the questions that will

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be asked, will substantiate this conclusion..

Part 1502.17 of the Regulations referred to earlier,states, in part, ..."The environmental impact statement shall list the names, together with their qualifications (expertise, experience, professional disciplines), of the persons who were primarily responsible for preparing the environmental impact statement or significant background papers...Where possible the persons who are responsible for a particular analysis, including analyses in background papers, shall be identified." 321

In connection with this point we note that beginning on page 217 of the Reserve hearing, the Air Force refuses to make these names known, other than the statement by a panel member that Captain Gauntt "says he had a hand in it." Pages 218-220----"I don't know who did that." 331

On page G-95 of the Valentine RDEIS the comments about the archeological expert are noteworthy. In all, there was no information provided about the persons responsible as required by 1502.17, and probably with good reason. One panel member states that he didn't feel it was necessary for the Air Force to review all the sonic boom literature (c.f. page i--"The Air Force has conducted an intensive literature review..."). As Mark Twain noted, the idea is first to get your facts, then you distort them as you desire.

The comments above, along with the major flaws in these papers,indicate that not only are these documents inadequate to serve as a basis for an EIS, but that the Air Force should take leave of it's closet experts and delegate to an independent technical group the task of producing a paper that,as NEPA requires, must be of "high scientific quality".

It is a harsh statement to say that these documents often appear to be deceptive in intent, but careful review leaves the inquiring layperson with no other conclusion. Residents of the Morenci and Valentine areas may be

certain that their only true recourse is to claim the protection of their Constitutional Rights, and take legal action to stop the implementation of what will be a true, uncontrolled medical experiment on the effects of chronic exposure to sonic booms on human beings. (Page ii---"There is little doubt that noise including sonic booms acts as a stressor, but it is not known with any degree of certainty whether prolonged exposure results in cumulative pathology."

The Air Force conclusion of no significant impact is not legal in the sense of 'Regulation' 1508.27 which states in part....."Significantly" as used in NEPA requires consideration of both context and intensity: (a) ... Both short-term and long-term effects are relevant. (b2)...The degree to which the proposed action affects public health or saftey.(b4)The degree to which the possible effects...are likely to be highly controversial.(b5)The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks." (emphasis mine)

Clearly, the Air Force must acknowledge their proposal will result in a significant impact on human beings, by definition of the very Act that moved them to create these documents.

The Air Force needs to maintain the highest standards and efficiency in air combat training. No one questions this need. But the true costs must be tallied. This training can be performed elsewhere,as it is now, and in the type of environment where the impact on human beings will be zero. Again it should be stressed that there is virtually no possibility that the Air Force will account for the true human costs of these proposals. The citizens' only recourse is to the legal system, based on the Constitutional protections that are the right of everyone, even "six highly annoyed" New Mexicans. This is not a technical problem, it is an ethical and moral issue.

INTRODUCTION

There are few, if any, regions in the free world where civilian populations are legally subjected to the conduct proposed for Valentine and Reserve, by the Air Force. The Papago Indians are being overflown supersonically at this time by the Air Force. The resulting structural damage and resulting effects on human health and welfare are considerable. There is at this time no EIS available based on the DEIS for the proposed supersonic flight at SELLS. The point appears to be that even without a Final EIS actions can be taken, as proposed, with impunity. The AF has issued itself a waiver, I assume, perhaps illegally. Residents of Texas and N.M. can take comfort in Col. Smith's statement (Page G-68 Valentine RDEIS) that"...in no way, with what we propose to do here, even by the worst stretch of your imagination, as to how many booms a day you can get, will it compare to what we have been doing to the people in Sells Arizona and the environs there too, for the past several years."

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The U.S.Navy has proposed supersonic air combat maneuvers over inhabited regions of Central Nevada. Their DEIS may be issued by November, 1983. One might have guessed that the Navy needs to "maintain air crew efficiency to prevent the degredation of the National Defense posture and for purposes of National Security." The AF intends to sonic boom eastern Nevada in Gandy MOA.

The Board of Commissioners of three counties in Nevada, have all passed resolutions stating their strong opposition to the Navy's proposal. The Nevada State Medical Association has declared its opposition to the proposal on the basis of concerns for the health and welfare of the civilian population. Ninety-seven percent of all the physicians practicing in rural areas of northern and central Nevada, have signed a petition requesting the

government to appoint a technical advisory committee to independently evaluate the data being used and abused to allow the Navy to reach the presumed conclusion that sonic booms produced by low altitude supersonic air combat maneuvers will not significantly impact human beings living below. This petition was instituted upon the clear presumption that much of the data and the interpretation it undergoes, will be misleading, based upon past experience here (and the analagous situation exists in Morenci and Valentine).

Perhaps Nevadans will receive a better quality document. The main Naval coordinator for the Central Nevada SOA, in San Bruno, California, when asked if the documents produced by the Air Force for Morenci and Valentine would be utilized in the Navy's document, replied in the negative. When queried as to the reason, the coordinator commented on the poor quality of the documents. However, this may be a simple case of interservice rivalry.

The largest organization of civil aviators in the world, the Aircraft Owners and Pilots Association (U.S.A.), has declared that the underlying concept of supersonic operations in a Military Operating Area, is hazardous to the saftey of all aviators. In an MOA, all pilots, both civilian and military have free use of the airspace upto 18,000 feet above sea level, freely aviating without restriction or hinderance or outside control other than the F.A.R.'s which govern flight in all airspace in the U.S.A. The AF uses the term "set aside" to refer to the SOA. There is nothing set aside in the proposed SOA's, except the limitation supposedly that military aircraft can not go supersonic outside that region. The implications for civilian pilot saftey are false however.

Perhaps the only element to be set aside will be the aircraft insurance on the civilian aircraft which operate at their own risk in the SOA. One

major civil aviation insurance company contacted by phone stated that insurance written on a civil aircraft legally flying in an SOA such as proposed, would be invalidated due to the hazardous nature of the activity. The rules of flight in a MOA are "see and avoid". The supersonic activities conducted in these MOA's by the military are legally defined as ultra-hazardous and should be confined to restricted areas. Obtaining a restricted area is a rules-making procedure and the military is avoiding this approach. However, the nature of the activities here would, as AOPA states, create "de facto restricted areas obtained outside of normal legislative channels." These hazards and questions have been glossed over in the present RDEIS's.

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Citizens of Texas and New Mexico complained in the hearings that their numerous petitions to the Air Force and others, went unheeded. In Nevada, numerous petitions have been compiled and forwarded to the government and the Navy, without any results. Citizens in Nevada have filed before the U.S. District Court in Nevada for relief, requesting a preliminary injunction to halt the proposed supersonic bombardment. It should be plain to residents of other rural areas that are similarly threatened, that despite all the talk and pleas, only recourse to the courts will restrain these federal agencies from taking actions that will cause irreparable harm to human health and welfare.

By attempting to create SOA's over inhabited regions of the country, the Department of Defense has undertaken a major federal action which is included in 'Regulation' 1502.4, a section dealing with "broad" federal proposals which require an EIS to address the proposed action's effects as a whole, not on a site specific basis. 1502.4c states, in part...."When preparing statements on broad actions (including proposals by more than one agency),

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agencies may find it useful to evaluate the proposal(s) in one of the following ways: 1. Geographically, including actions occurring in the same general location, such as a body of water, region, or metropolitan area. (one notes here that the siting criteria for all military federal agency SOA proposals certainly select out specific rural areas as targets).

2. Generically, including actions which have relevant similarities, such as common timing, impacts, alternatives, methods of implementation, media or subject matter...."

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Presently, each SOA proposal is targeted upon a small population by a federal agency, whether Air Force or Navy. The major federal action for supersonic flight over civilian populations clearly requires a 'generic' or 'programatic' EIS, prior to allowing each federal agency to produce its own site-specific version of an EIS. A 'generic EIS' led to the cancellation of the Supersonic Transport overland flights several years ago. The federal government must, before implementing any SOA's over civilian populations, complete a satisfactory generic EIS addressing the central issue as to the hazards to the saftey, health and welfare of human beings, and the many associated issues. This issue should be dealt with in the courts if the federal government does not proceed voluntarily in compliance with the requirements of NEPA of 1969.

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As the various federal agencies are presently proceeding, each impacted region is dealt with separately. This effectively fragments and mutes any concerted actions of the relatively small groups of citizens in the different rural areas who have been selected by identical siting criteria for what was previously, quite correctly, called an uncontrolled medical experiment.

The ethics and morality of this situation demand redress. Recourse to the courts is the only real means of addressing the issue.Do it yourself.

The EIS that may result from the RDEIS's at hand, will not be reviewed by any capable persons outside of the leading agencies which produced the documents. Certainly the EPA and the CEQ (Council on Environmental Quality) will not produce a scientific critique of these documents. The EPA Region Nine (which includes Nevada) has terminated all their "noise specialists". Budget cuts have affected the reviewing process in all other regions and also other agencies with expertise in this area, such as the F.A.A.

Science, August 5, 1983, page 529...."The Council on Environmental Quality (CEQ) has fallen on sorry times since the days when its halls were thronging with experts, its reports were abundant and much-heralded, and its chairmen had the ear of Presidents...The House Appropriations Committee is particularly unhappy about CEQ. In its report it says that "not a single scientist or technical expert is on the permanent staff," which "renders the Council unqualified to offer substantive contributions or policy advice."... The CEQ is regarded as having performed an extremely valuable function in the past, issuing reports, monitoring the National Environmental Policy Act (NEPA), performing policy analysis, acting as a direct line to the President on environmental issues, and putting out an annual report that contained extensive independent analyses of environmental progress and problems. Now, as far as many observers can see, all that CEQ does is put out tardy annual reports that are little more than justifications of government policies."

In short, the only outside review these RDEIS's will receive, will be from the lay public themselves. There will not be any scientific review by qualified persons of the conclusions presented by the AF and Navy, which perhaps renders the demand for a generic EIS moot in any case.

Finally, after reviewing the first draft EIS and the subsequent revision, my personal opinion is that these documents have arisen from a long

tradition. This tradition is----proceed unless opposition is truly formidable (referring here to bureaucratic types of actions), bring out inhouse experts, and use the Mark Twain rule of EIS creation.

S. Hammon,a senior partner of the Vibration Damage Specialists in Louisville, writing several years ago in the American Bar Association Journal commented upon a document produced by the Air Force, entitled "Sonic Boom Fact Sheet".

Hammon wrote: "When the fact finding bodies are called upon to make decisions concerning sonic booms...in the near future, statutes, precedence, and customs will not exist. If guesswork is to be avoided, dependence must be placed on the opinion of learned experts. I stress Gray's qualification "learned", since there are a host of experts, but only a few who have the basic qualifications to allow them to understand this subject. The greatest offenders in this respect strangely enough, are the two agencies who fly the greatest number of jet planes--the Air Force and the Navy....All reference is to a mythical "they", who remain completely obscure. Most of the attempted answers have summations which are ludicrous due to over simplification and lack of relevancy to the arguement, which they pretend to sum up. From the beginning to the end this work is erroneous."

DATA BASE

The information upon which the RDEIS's are based is available to the layperson; articles in the scientific literature, books, etc. This is the same information on supersonic flight and its unwanted stepchild, the sonic boom, which the Air Force uses to produce these documents. The statement of the panel member noted earlier, that the AF did not review all the literature

nor was it required to, is unacceptable. Also, as noted earlier, there will not be any independent qualified scientific review of these documents. National security has been raised as an issue in each and every of the SOA proposals, including the two in Nevada. The wording,warning of severe degredation of air crew combat readiness and the subsequent effect on the national defense posture, appears to issue from the same word processor.

There are no citizens who would not make sacrifices that are actually essential for national security. However, numerous deceptions have negated the average rural citizens' instinct in these regards. The primary victim of these RDE&S's are the scientific data. To ameliorate this inbuilt bias, it was suggested earlier that independent, unbiased, technical commissions could be created to evaluate the proposals and the central concept itself. Other organizations also have reviewing abilities such as the General Accounting Office and the Congressional Research Service.

In the pages that follow, several of the fundamental assumptions or interpretations of the AF are questioned, mainly on the basis of the documents that the AF itself has used. A dispassionate review of the scientific literature and the documents produced by the AF leads to the conclusion that the present documents are inadequate as a foundation for an EIS, due mainly to the selective nature of the presentation of evidence and facts and at times to the apparently deliberate distortion of scientific data.

The time required to comment on these documents in their entirety is prohibitive. However, the points made later in this comment paper are not highly selective, that is, the errors and misrepresentations commented upon are distributed throughout the entire AF documents.

THE LOGIC OF THE RDEIS's

The strength of a structure can be no greater than the strength of its foundations. In the case of the AF documents, the final conclusion of "no significant"impact upon human beings due to low altitude supersonic overflights can be traced back through the literature, and the seminal documents and the scientific foundations can be examined. The conclusions drawn from these documents, which are then used to draw further conclusions etc., then allow us to evaluate the statements and assumptions made in final analysis.

It is instructive to compare the first DEIS with the RDEIS, simply to educate oneself as to the creative interpretation of scientific data. However, concerning ourselves with the RDEIS,the following represents the apparent logic the AF utilized in deriving their final conclusions.

1. The CSEL of individual sonic booms are calculated from expressions utilizing the peak overpressures of a sonic boom.

2. C-weighted DNL are computed from the CSEL of individual impulses.

3. C-weighted day-night levels were derived on the basis of community responses to sonic boom exposure, mainly Edwards AFB and Oklahoma City tests.

4. CDNL are accurate measures of human response to the acoustic impulses we call sonic booms.

5. The EPA, in approximately 1976, proposed the use of a C-weighted day-night level to estimate the response of other communities to large amplitude single event impulsive noises, i.e. sonic booms.

6. Carlson developed a simplified method of estimating sonic boom overpressures created by various types of aircraft and blunt bodies, a paper published in 1978. (Carlson's nomograms already appeared in 1966)

7. On the basis of 21 sorties by the F-15 at Oceana, Bolt, Beranek and

Newman, who have done numerous studies for the military, used Carlson's simplified method to estimate the sonic boom overpressures that were produced at sea level when the 21 aircraft were supersonic.

8. BBN then use a table based on a standard atmosphere which reveals that less than one third of the supersonic events produced a sonic boom which could have been detected at ground level. One flight was excluded so as not to bias the final results.

9. The long term average sound level at points on the ground was determined by the average CSEL per event, the number of events and a probability factor.

10. BBN used a "rough" approximation that these 21 flights occurred in an elliptical area and through a series of calculations arrived at the resulting sound exposure levels within two concentric ellipses which contained the aircombat maneuvers of the F-15.

11. On the basis of the CSELs for the ellipses, the CDNL's were calculated. (based upon 15 sorties per day, 5 days weekly, 52 weeks yearly, no night time operations and less than one boom per supersonic flight).

12. Since the number of "superbooms" could not be calculated by BBN "from the present data", they state that one of the 18 booms reported by residents of Valentine tests (June,1978) was a superboom. Thus they conclude that "With lack of any other data, in this analysis it is assumed that one boom in 20 reaching the ground will be a superboom."

13. BBN determine that superbooms will not affect the CDNL on a long term basis.

14. BBN adjust their calculations for the ground level in New Mexico and Texas and determine that maximum CDNLs to be produced in Reserv or Valentine are scarcely above 61 decibels. No corrections for changes in humidity noted.

15. The Air Force places these ellipses into portions of Valentine and Reserve MOA's and notes that these sound levels are less than those recommended maximums for normal urban residential neighborhoods and that at the most, only five or six citizens will be highly annoyed by supersonic air combat maneuvers in their county.

In returning to the roots of the data base, the tests at Edwards AFB and the Oklahoma City tests, one is reminded of the strength of the data that is the foundation for the finding of no significant environmental impact in the RDEIS. (from Schomer's paper :"Evaluation of C-Weighted Ldn for Assessment of Impulse Noise", J. Acoust. Soc. Am., Vol 62, No.2,August 1977.)

Even without consideration of studies that show truly rural areas are far more susceptible to the effects of noise, either impulsive or non-impulsive, the OC 'tests' are a very shaky foundation upon which to base conclusions noted in the RDEIS.

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Only a few points of many may be noted. Oklahoma City was chosen for these tests because it was an aviation oriented community, experienced with sonic booms. As part of the program, "control of the truth" was exercised in that a massive publicity campaign was conducted prior to the tests to inform the citizens that they would be subjected to sonic booms from overflights that were designed to determine if the SST should be developed. This program was portrayed as of great economic importance to OKC and the entire country. The residents were told that their reactions would be crucial to the development of the SST. The majority of the respondents knew that the test was of six months duration and that a favorable response would help the SST.

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Despite these and many other such factors, once the tests began, numerous court actions were taken to force the cessation of the tests due to the impacts of low overpressure sonic booms. Legal actions included both private plaintiffs and the Oklahoma City Council, itself. At this point the numbers of complaints were very high. As the courts declined to offer relief to the plaintiffs (this was a 'test'), the numbers of complaints declined dramatically. It is upon these numbers that we obtain figures showing that overpressures, averaging about 1.2 psf, "annoyed" only a certain percentage of people.

The results of these "controlled" sonic booms are meaningless when applied to the proposals at hand or when extrapolated to indicate the benign effect of long term exposure to high intensity sonic booms. The above is only one of many points that could be made in this connection.

The response of humans to sonic booms is reported in various studies and in the RDEIS in terms of "annoyance". "Annoyance" is a term that has no legal standing. You cannot sue anyone because they have caused you to become extremely annoyed. You cannot claim inverse condemnation of your property because an agency of the U.S.Government has caused you extreme annoyance. The term represents an amalgam of disturbing events, such as interference with sleep, interference with conversation, anxiety and fear engendered by noise or perceived danger, etc. The point is that when an RDEIS claims certain levels of annoyance will occur, no legal or even meaningful statement has been made.

It is noted that all the figures relating to overpressures that "will" occur in these SOA's, are calculated. No measurements were made at Oceana, no measurements were made during the "Valentine Tests", etc. Results are based on 21 sorties from which, on the basis of nomograms, calculations,estimations

and approximations (from aircraft in level flight in standard conditions). Perhaps most indicative of the presumptive nature of the data is the statement by Bolt, Beranek and Newman that "Determining the probability of a superboom occurring, per aircraft sortie, is not readily possible from existing data...With lack of any other data, in this analysis it is assumed that one boom in 20 reaching the ground will be a superboom."

The French "Jericho" tests are noted several times in the RDEIS and the bibliography. These researchers went to great lengths to obtain actual measurements of sonic boom overpressures and locations of sonic booms made by fighter aircraft engaged in standard aircombat maneuvers. These researchers, whose evidence was available to BBN and the AF, state: "All aircraft produce at least one focus boom when they start supersonic flight(focus due to acceleration). Military aircraft which make high load factor maneuvers produce focus and superfocus booms all along the supersonic airpath."

Again, simply one point amongst the hundred that indicate how unreliable the RDEIS is. It would be appropriate to note here again, that in the RDEIS as in the first draft, the terminology relating to superfocused booms is used incorrectly.

The simplified method used by the AF to obtain SOA's should be patented. For the first time in this land one is able to lose Constitutionally granted rights (the freedoms that we are protecting, presumably) on the basis of calculations performed by a simple, handheld calculator.

An internationally recognized expert on sonic booms, one who is noted in the RDEIS, told me that the CDNL levels recommended by the EPA and HUD are certainly too high, even presuming that they in some manner measure the true response of human beings to sonic booms.

In sum, if time allowed, the RDEIS and its substructure could be shown,

item by item, to be inadequate, both as a document that pretends to scientific accuracy and as a legal document from the point of view of NEPA of 1969.

If, as the Air Force states,the sonic boom impacts in Reserve and Valentine would be far below EPA and HUD sanctioned levels for an urban, residential neighborhood, then fly the aircombat maneuvers over the cities. The noise levels, the AF states, could be doubled and still fall within these guidelines. If the environmental impact of the sonic booms is so minimal, then why did the suggestion of residents of New Mexico,to fly all missions over Valentine, cause Air Force Col. Jeff Smith to say "For those who say take it all to Valentine, I find that unconscionable personally." (page 193 of the Reserve RDEIS). If the levels of both areas are so low that even doubling the number of sorties in one area would not cause the HUD criteria to be exceeded, then why does the Air Force indicate that an ethical problem would be involved with this shift?

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Finally, as many persons at the hearings asked, why was the question of flying supersonic over inhabited rural areas not raised earlier? After all, and contrary to the impression given in the hearings, these aircraft (F-15 and F-16) became operational several years ago and their supersonic flights at Mach 1.1 have been attained routinely by military fighters for two decades. It should be noted that the F-15 went to Holloman AFB on the basis of the positive finding noted in "Environmental Determination for the Proposed Beddown of F-15/T-38 Aircrafdt at Holloman AFB, N. Mexico (Oct/76)." The same number of sorties were planned then, as now. Part (c) of the summary states in part: "Supersonic training flights will be increased by the conversion of F-4 to F-15 aircraft. However this air combat maneuver training will take place over the White Sands Missile Range (WSMR) and will not

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342 affect the area outside the boundaries of the WSMR. The supersonic events will increase from 550 to 1300 per year." (?sic) 342

F-15 Combat Maneuvering

This subject is chosen from many others, simply to illustrate another manner in which the RDEIS is a particularly flawed document, stretching even the laypersons' logical sensibilities to unacceptable limits.

The RDEIS states that aircombat maneuvers will average Mach 1.1, and utilizing the concept of Threshold Mach (calculations only)notes one third of all sonic booms will reach the ground, resulting in no significant impact on the environment. National security will be upheld, the national defense posture maintained and the Air Force crews maximally prepared by air combat training within these limits.

Page 1-3..."The F-15 missions require accomplishment in areas set aside for supersonic flight to utilize the aircraft in a supersonic regime. This flight regime is characterized by increased maneuverability, high G-loads, and high closure rates."

343 Page 1-9..."By operating in the subsonic flight regime only, pilots are denied valuable experience in the vastly different performance and handling characteristics of the aircraft in the flight envelope above Mach1.0." (added emphasis) 343

Elsewhere we are told (the page number escapes me) that because of the advanced design of these aircraft, pilots can slip through Mach 1.0 without noticing, and that the attention necessary to stay at Mach .99 degrades the training mission. Thus it appears that the "vastly different performance and handling characteristics"of the Mach2.5+ capable aircraft are maximal between Mach 1.0 and Mach 1.1.

Page 4-20..."All participants must decrease altitude to utilize the maximum acceleration and turning of their aircraft." (not quite the straight and level flight of Carlson's simplified method). Aviation Week and Space Technology, May 23, 1983, page 75, discusses the F-15 G-overload warning system. "The warning is continuous until the overload condition is relieved. This system permits the full 9-G limit use of the aircraft, enabling the pilot, whenever possible, to open up the flight envelope."

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Page 8-1..."Due to the advanced characteristics of the F-15, supersonic flight is required if pilots are to effectively employ the aircraft in the role for which it was designed and procurred...combat ready pilots would be fully able to explore the aircraft performance capabilities and develop practice and refine sound combat tactics and habit patterns in the supersonic flight regime...". (Most pilots would agree that it is difficult to explore the flight envelope of a Mach 2.5+ aircraft while remaining between Mach 1.0 and Mach 1.1. The quote in the paragraph above is a case in point.)

Next it is noteworthy that the development of the F-15 through the various models, to the F-15D and the Strike Eagle, have been directed to the objective of creating an all-weather, day-night capable aircraft, with equally great air-to-air and air-to-ground capabilities. This will of course produce great numbers of night flights for training purposes and certain types of maneuvers which will consistently generate large numbers of focused booms. Also, an ACMI like system must be installed in N.M. and Tx..

Referring back to the quote from page 1-3, it must be re-emphasized that there is nothing "set aside" about a SOA, from a pilot's viewpoint. This airspace is freely available to all aircraft, military and civilian--only at supersonic speeds it is transformed into a 'killing ground' that AOPA has correctly labelled an extreme hazard to civil aviation. The RDEIS glosses

stressed repeatedly, that their theoretical figures are conservative, are incorrect. The real atmosphere often focuses sonic booms, the effect being greater at the lower Mach numbers the AF says it will average. Scant,or no attention,is paid to studies which have measured the amplification factors related to rectilinear acceleration; multiple booms created in this fashion; noting the fact that multiple, separate booms are created during turns, and superfocused booms in accelerated turns; amplifications created when the sonic boom envelopes of supersonic aircraft intersect during a pass in opposite directions and during overtaking maneuvers. It is nowhere stated that the focused boom in a turn will be "thrown" from ten to twenty miles lateral to the flight path of the aircraft turning. Audible rumbles, that many scientists term significant, occur for tens of miles lateral to the cutoff. Terrain amplification factors of 12 and greater have been measured. Amplification factors due to being near buildings can result in 4 fold or greater sonic boom overpressures (cf.calculated values). Dynamic amplification factors have been scarcely mentioned, although they constitute an impact of major proportions. Even in straight and level flight, variations of overpressures below and lateral to the flight path vary 3-4x, simply on the basis of unknown factors, presumably atmospheric turbulence. These results are from studies in which actual measurements have been performed.

Even at threshold mach, a caustic is formed. It may not reach the ground but if a resident, or one of the more than 60,000 yearly visitors to this area is standing on a hill, he or she will be on the receiving end of a sonic boom that will be at least two times that of the calculated overpressure.

It might be emphasized that most discussion relates to overpressures, both those measured by others and not used by the AF, or those theoretical overpressures calculated by the AF for this RDEIS. Peak overpressure is one

element that is used to judge the impact of a sonic boom, but it is not the peak overpressure that is the major correlate with the annoyance expressed by persons below. Also the AF assumes a normal distribution of data obtained from the Oceana sorties. It is clear from their charts that the data cannot be normalized in a sense that makes the data a basis for statistical predictions.

Returning to page 3-10, one can illustrate several of the previous points. One notes that the AF hopes to demonstrate that longtitudinal accelerations of an aircraft at an altitude and Mach number above cutoff, produce relatively small areas of focused sonic booms, that are occasionally up to 2 to 5 times the overpressure of normal "N" waves, but that a highly stable atmosphere, in their own words, must exist for these events to occur. After noting Operation Jericho, the AF states that turbulence decreases or dissipates the boom; the AF notes that "the most important point is that the peak pressure of a focused boom decays more rapidly than in an "N" wave and thus the positive impulse is much lower..."

Re-emphasizing that turbulence (i.e. the real world atmosphere) causes frequent focusing effects, even for aircraft in low Mach, level flight, that peak overpressures are not the major correlate with impact on humans, one notes that in Operation Jericho the rise times and the peak impulse of focused booms were highly significant and that the true effects of focused and superfocused booms are such that amplification factors range from 2 to greater than 9. In other words, a focused boom is a focused boom.

On page 3-11, the AF states that focused booms do not move along the ground as is the case with carpet booms and that the focal zone is fixed. The focal zone is fixed only in relation to the position of the aircraft at the time the caustic is produced, which is common sense. The focus for the

the caustic moves along this region in exactly the same sense as a carpet boom does, before it becomes extinguished. This focal zone is usually the site of two or three separate sonic booms which occur in rapid succession (not to be confused with the 'double boom' of the 'N' wave of a normal sonic boom). These impacts have not been addressed in the RDEIS.

As noted earlier,the fact is alluded to, but not stressed,that studies have shown that the area involved with a simple longitudinal or rectilinear acceleration, even at high altitudes, is accompanied by a focused boom and then an associated area in which 4 to 6 multiple booms occur, each equaling the overpressures of the carpet boom. These booms have similar impacts on humans but are not included in the RDEIS.

The AF states that in supersonic turns it is quite possible that sonic booms and focused booms will not reach the ground unless the Mach number and altitude exceed certain conditions. Using tables in the sonic boom literature one can easily determine whether this statement has any meaning other than to deceive.

For an fighter such as the F-15 at Mach 1.3 and an altitude of 33,000 feet, production of a focused boom can be avoided if the bank angle does not exceed 10 degrees. This translates into a heading change of 0.4 degrees per second(perhaps a slight overestimation). Thus the F-15 requires six minutes to perform a simple course reversal under the conditions devised by the AF. During this time it would travel approximately 60 miles and exit the neat ellipse,let alone the entire MOA. "Bombers and fighters in sustained supersonic flight have to make at least one focusing turn to fly back to home base because the radius of a nonfocusing turn is far too large to be practical." (Operation Jericho).

Page 3-15...."This is supported by the fact that the tests conducted

in 1968 at Tonapah, Nevada, showed sonic booms with overpressures ranging from 50 psf to 144 psf did not cause direct injuries to the exposed people." Upon reading the paper, one notes that the researchers' main conclusion was their surprise, that when the windshield was blown out of their stationwagon, the glass fragments were propelled outward for a distance of greater than 12 feet. It had been thought that sonic booms caused glass breakage with the fragments dropping neatly at the foot of the window.

Additionally, the researchers noted that the windows of all the campers parked along the low altitude routes, were blown out. By the third day, there was considerable difficulty amongst the scientists taking readings, due to the flinching and stress that occurred, beginning at the time when the aircraft first appeared, let alone the sonic boom impacted.

The AF note that no harm occurred to humans is perhaps diluted by the fact that no observations of any nature were made,other than to note that there was a fullness and ringing in the ears, or a pressure like sensation against the body. Mr. Lord, an environmental expert (AF) stated at the Valen. test hearings (Atch.7.30)..."...I know people, I, myself, have been subjected to 100 psf so I know what it sounds like—I didn't hear for a while afterwards."

To the lay person, this phrasing is reminiscent of temporary deafness. No followup studies were done. It is a fact that temporary threshold shifts are forewarnings, if repetitive, of permanent hearing loss. The AF statement is misleading at best. It is also clearly noted in the paper that the startle reflex, which the AF states will habituate, didn't. There is ample scientific documentation that habituation of the startle reflex does not occur. Where the AF so states, its experts are confusing the orienting reflex with the startle reflex. The eventual result is harm to humans via stress.

The orienting reflex (to much lower levels of overpressure than will occur in Valentine and Morenci) can to a large extent be extinguished. However, longer term studies have demonstrated that "behavioral adaptation" is actually a compensatory mechanism. After a period of 'coping', the human organism decompensates. This has been documented in human and animal studies but is ignored or misinterpreted in the AF document.

Page 3-17...The AF states that there are no generally accepted techniques for predicting worst-case,long-term,health impacts from noise exposure. Dr. Worthington is delegated by the AF to represent the most pessimistic views known to the AF. Dr. Worthington has encouraged a scientific overview of the subject. To state that his views are amongst the most pessimistic on the subject of the impact of sonic booms on human beings simply indicates that the AF did not review the literature. The literature is clear that it is only a question of how bad does it get. The AF must address the health effects of chronic sonic boom exposure, in a worst case analysis, as required by NEPA, in their revised RDEIS (the RRDEIS).

Nearly every page of the RDEIS deserves correction. It is unfortunate that farmers, ranchers, housewives, TV repairmen and assorted other commoners have to defend themselves against this misuse of scientific data. The archeological study noted in the RDEIS is close to a farce. Two of ten overflights registered "sonic booms" with overpressures of 0.15 psf or in that neighborhood!! No damage to rocks, but no mention of the rock falls precipitated at other archeological sites by sonic booms,described by others.

Alternatives are required by NEPA to be thoroughly researched. Much of what is presented is misleading or ludicrous. Weekend flights over the WSMR are dismissed on the basis of an "informal survey" of an undefined group at

Holloman AFB, citing the problem with morale should this alternative be accepted. Is it the public's responsibility to provide alternatives? The beddown statement allowed the F-15 into Holloman on the basis that no outside areas would be affected. If the F-15 flys down to 15,000 feet, and the T-38 is engaged primarily in air-to-ground gunnery, then both activities can occur at once in the same airspace with a buffer zone between them. This and weekend flights will account for all desired supersonic sorties and put them over uninhabited land.

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The costs of all alternatives may appear large, but that is simply due to the fact that the true costs have not been calculated.

The Revised Draft statements issued for Reserve and Valentine Supersonic Operations Areas, are not adequate by the standards set forth by NEPA of 1969.

The concept of supersonic flight at low altitudes for long periods of time over human beings, has never been addressed independently (except for the high altitude SST which was cancelled). The AF documents are deceptive. No competent outside experts will evaluate these documents. The AF overflies the Papago Indians, never having completed the EIS process. As Col. Johnson told the people of Valentine (Atch 7.28) "....There are several other people who have to be asked, the Federal Aviation Administration has to be asked. It's impossible, well, I don't want to say impossible, it's improper for the U.S. Air Force to fly supersonic over any area that has not gone through a coordination process or been okayed up through the legislative level of the Government and the FAA. We get our permission from Headquarters U.S. Air Force and that's who okays it."

There is no doubt that the aircraft should be flown, and the aircrews trained to the maximum of capability. But the Air Force is only able to have its cake and eat it too, by producing a document that deceives those who will bear the impact of the proposal.

The time has come for a totally independent, technically competent group to be formed, a true forum of experts created to evaluate the concept of supersonic flight over human beings, at low altitudes; and/or a Congressional investigation should be undertaken to examine these questions on a nationwide basis and dealing with all branches of the military.

There is little doubt that these proposals will be acted upon regardless of the amount of protest, whether emotional, scientific, or otherwise. The only recourse for the common person is to recall exactly the freedoms that the government agency is working to protect and to use those freedoms to secure a just and equitable resolution of the problem.

If the Air Force uses the present inadequate document as the basis for its final EIS, then citizens should, on their own if necessary, proceed with legal action in order to obtain a permanent injunction to protect their health and welfare, the quality of their lives and the land that they live in. This should be done with the clear understanding that the government agencies involved can attain the same maximum quality of training in other ways, but will not attempt to do so unless they are forced to.

PUBLIC HEARING

PLACE: Gymnasium, Reserve High School
Reserve, New Mexico

DATE: 20 October 1983

TIME: 1930 hours to 2322 hours

SUBJECT: RESERVE MILITARY OPERATIONS AREA ENVIRONMENTAL IMPACT STATEMENT PUBLIC HEARING

BEFORE:

Colonel Kenneth E. Ratcliff, Chief Circuit Judge,
Third Circuit, Randolph Air Force Base, Texas

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P R O C E E D I N G S

COLONEL KENNETH E. RATCLIFF, Chief Circuit Judge, Third Circuit, Randolph Air Force Base, Texas, (hereinafter referred to as the HEARING OFFICER) called the hearing to order at 1930 hours, 20 October 1983, at Reserve, New Mexico.

HEARING OFFICER: I apologize for us getting a little bit of a late start, but there were some who were still arriving and it is quite important that we give everyone an opportunity that is interested in being a part of the hearing, give them an opportunity to be present before we actually started. I would like to express appreciation for the introductory program that was given. I think that helps to set an appropriate atmosphere for any type of a public proceedings. So I thank you for that.

Let me, first of all, introduce myself. I'm Colonel Kenneth Ratcliff. I am the Chief Judge for the Air Force Third Circuit. I'm stationed at Randolph Air Force Base, Texas. I have been assigned the responsibility for conducting the public hearing on the Draft Environmental Impact Statement which has been filed by the Air Force with the Environmental Protection Agency. Contained in the Draft is the proposal of supersonic flight operations in the existing Reserve Military Operations Area located in West Central New Mexico.

My role in this proceeding is simply to conduct the hearing. My past experience has been judicial in nature;

although I am not knowledgeable about the details of this project, we do have others present who are knowledgeable.

I have, of course, not participated in the development of the project; nor have I rendered any legal advice with respect to the project. Further, I will not make any decisions nor will I be offering any recommendations to the Secretary of the Air Force.

Let me touch, if you will, upon the purpose of this proceeding. Hopefully, again, to help set the proper tone, the proper atmosphere for the proceedings itself.

The purpose of the hearing is to consider the environmental impact of the proposed project. This public meeting is a means of obtaining and reporting the opinions of interested persons for later evaluation. It is important therefore that all parties who may have an interest in the matter have a reasonable opportunity to speak or to submit their comments in writing.

Now at times there seems to be some misunderstanding about the purpose of such hearings and, although I'm sure you fully understand this, I would nevertheless like to touch upon it in a little bit more detail.

For example, some of the things the hearing is not for. It is not for the purpose of obtaining a vote to see just how many might be in favor of or how many might be opposed to the project. It is not for the purpose of engaging in a debate with regard to the proposal. It is not

for the purpose of the Air Force trying to convince you as to the proposal. Nor is it primarily for the purpose of trying to answer questions that you might have in mind.

As I indicated, just a moment or two earlier, the purpose of the hearing is to consider the environmental impact of the proposed project. That is, to obtain more information that is relevant to the proposal; hopefully, information that can be researched and can be confirmed as being factual data; and, thus, can be weighed in the overall evaluation in making an ultimate determination with regard to the proposal.

Now with regard to questions that might be pertinent, those which would be particularly helpful would be, of course, those questions which would-- a question, for example, in an area that is already within the proposal that perhaps you should feel has not been gone into adequately enough and therefore might raise a question with regard to it. The hearing therefore gives you this kind of an opportunity both to raise such questions as well as to make those statements that you feel that are pertinent.

If you should go away feeling ultimately that you are disappointed because the Air Force did not respond as you have possibly desired, then it may well be that you

have missed the point as to the purpose because, again, the primary purpose is to obtain your input.

Once again, if you feel that the Air Force is merely going through the motions of carrying out a responsibility, please keep in mind that the responsibility that the Air Force basically has is to set up the hearing and conduct it and thus use this hearing as another means of gathering the information that can be utilized in making the evaluation. So even though I've indicated several times, it is indeed a very important element that you recognize that the essential ingredient here is obtaining your input.

Now I touched briefly upon questions that might be pertinent and statements that might be pertinent, but let me touch upon that just a little bit more. Obviously, if you wish to make other statements than that which I have mentioned, you will be at liberty to do so. But those which will be most helpful in reaching an ultimate decision will be, for example again, the questions which show important areas that up to this point have not been touched upon; and, again, questions that might point out errors or omissions with regard to studies that have already been made.

The statements that are made that will be the most helpful will be those which contain factual data and where possible provide citations or sources upon which

others can research and thus arrive at some conclusion based upon the information that you have provided. Statements which express desire, belief, or simply opinions, or those that are made, I'll say, with an emotional, strong feeling, they may be very fine. They may be those which might be appreciative to many within the audience; but, when it comes to the point of making an evaluation they might not, as you might expect, be nearly as helpful as the factual type of statement such as I have mentioned which will provide facts and source material that will help in the making of an evaluation.

Now in a few moments the Air Force will be giving a briefing on the Air Force mission as it relates to this proposal. This is informational in nature so that you might better understand why the supersonic flights are desired.

At an appropriate time you will be permitted to ask questions for the purpose of further clarifying the purpose of the Air Force mission or the proposed Air Force mission.

This meeting, of course, is informal in nature and, yet, as you might recognize, to insure that it is conducted in an orderly manner, it will be necessary for us to follow some guidelines so I will provide some of these at this point. As we move through the proceedings,

I will provide other instructions as we move along. As I indicated, after the initial remarks and some introductions, we will go into the Air Force briefing.

The Air Force briefing will be followed by an opportunity for you to ask questions with regard to the briefing or, as I've indicated, with regard to the Air Force mission as it relates to this proposal, questions that might help to clarify this mission in your mind.

Then, lastly, following the question and answer session, there will be the opportunity for you to make oral statements and to submit written statements, should you so desire.

Each individual that speaks, I will ask that you come to the microphone which is at the podium which would be to your right, at least for most of you. There is another podium and, as there is a need for Air Force personnel to speak, I would ask that they use the podium that would be to their left or to your left. I will attempt to recognize individuals that are speaking with questions and answers with a show of hands. I will try to recognize those who hold up their hand first. As individuals come to the microphone, of course, we will be asking that you give your name and your address.

I might call to your attention further that all oral statements are being taken down verbatim by Mrs. Shields who is a qualified court reporter.

And, of course, any written statements that are received, along with the transcription that is being made, will become a part of the record. And all of this will be forwarded to the Office of the Secretary of the Air Force for use in preparing the final environmental impact statement; and, of course, thus it is used in the decision making process.

We have a number of dignitaries with us this evening and before proceeding further, I would like to recognize them. I would like to indicate, of course, that, if for any reason that anyone has been omitted that should be recognized, I certainly extend to you my apologies, it is merely an oversight that has not been done purposely.

I would very much at this time like to commend you for the turnout that you have. I hope and trust that for any public gathering that you have a similar turnout. I think it is commendable to any community that you have a good showing that reflects a great interest in those things that are important to you and to your community and I commend you for your presence and for your interest. So even though I can't call each of you by name, let me assure you that you are the very center and the very purpose for us being here.

As I mention these individuals, maybe you've already had time to take note of their presence, if they are not standing, perhaps they would do so in order that

you might indeed be aware that they are here and you might see them. At least some of these individuals will be speaking at a later point.

We have Michael Alguin who is the representative for U.S. Congressman Bill Richardson. He is holding up his hand back here to your right.

We have Mister Curt Saenz who is the representative up here for U.S. Senator Dominici.

We have Mister John Ramming who is the representative for Governor Anaya.

We have with us this evening State Senator Ben D. Altamarino. He's over here.

We have Bill Huey who is representing U.S. Senator Bingaman.

I would introduce this evening Colonel Stamm, who is representing the Commander of the 49th, Colonel Chambers, who is not here this evening. And he, Colonel Stamm, is representing Colonel Chambers, the Commander of the 49th Tactical Fighter Wing, at Holloman. And Colonel Stamm is the Deputy Commander for Operations for the Wing there at Holloman.

At this time we have the Project Officer who is Major Graham who is the Executive Officer of the 49th Tactical Fighter Wing at Holloman. He is, as I say, the Project Officer and at this time I will ask that he brief you with regard to the Air Force mission as it relates to this proposal.

MAJOR GRAHAM: Good evening, ladies and gentlemen. My name is Major Graham. I'm from the 49th Tactical Fighter Wing at Holloman Air Force Base. Before I start, I would like to add a special debt of thanks to Mr. Gallagher and to Mr. Costin for their help in setting up this meeting.

(Slide briefing initiated.)

The reason the 49th is here tonight is because of this airplane, the F-15 Eagle. This is the nation's and actually the world's premier air superiority fighter. It's able to outfly and outfight any other aircraft in the sky. It has remarkable turning performance, remarkable acceleration, and the most advanced avionics of any aircraft in the world. For that reason, we need training at supersonic speeds. The mission of the 49th Tactical Fighter Wing--you'll see on the slide--in layman's terms is to be able to deploy at short notice anywhere in the world and once there, to engage any hostile aircraft in the area and destroy them and to protect our forces.

We also provide two aircraft on twenty-four hour alert, three hundred and sixty-five days a year, to support the North American Air Defense Command for the defense of the southern United States. These aircraft are engaged in missions such as helping aircraft in distress, tracking highjacked airliners, or finding drug smugglers coming in across the borders.

The reasons that we fly supersonic are listed on the slide with the primary reason listed at the bottom. You'll see the proficiency flights that require supersonic speeds.

Why do we need supersonic training? Well for one thing, recognition time changes as the closure rates change. If an aircraft performs at higher speeds, things happen faster and a pilot needs to be able to cope with it. He develops habit patterns based on the speed he is flying at; sort of like driving your car on the highway at 55 miles an hour or driving your car in the Indianapolis Five Hundred. The habit patterns have to be developed. The performance characteristics of the airplane vary with varying speeds. Again the pilot has to be able to fly the aircraft throughout the envelope, particularly, in the high speeds. Probably the most important reason is that combat has proven that the pilot is able to survive better and he's able to achieve higher kill ratios if he can operate at high speed in a combat environment.

For the 49th Tactical Fighter Wing at Holloman we require twelve hundred supersonic training sorties every month. Right now, our only supersonic area is the White Sands Missile Range near Alamogordo. That leaves us with a requirement for six hundred additional supersonic sorties every month.

Now looking at places to fly. We are complying with the Air Force supersonic policy which requires us to fly over water when possible or, if not, over land above thirty thousand feet. Our training requirements dictate that we fly below thirty thousand feet and therefore we have to seek a waiver to the Air Force criteria.

In looking for airspace in which to train, a hundred and fifty miles is a good training range in the F-15. Anything outside of that is a little bit too long for us to have the time to train or it would require air refueling. We're looking at a minimum impact with other airspace users; we're looking at a sparsely populated area; we want sufficient size and the optimum size, determined from our ellipse, is about forty to about fifty nautical miles, again, with no effect on existing operations.

We've looked at a lot of alternatives in trying to decide where we could fly or where we could get additional supersonic airspace. We have looked at deploying from Holloman or operating from Holloman using air refueling, and flying in airspace that is already approved for supersonic flight. We found that the airspace was already saturated with local users, or that costs were prohibitive for deploying that far away. We temporarily deploy for special exercises and we'll continue to do so in the future.

We looked at airspace around Holloman. Our best area is the White Sands Missile Range northwest of Alamogordo. Again, as I said, it's our only supersonic training area. We are allowed to fly supersonic at ten tousand feet mean sea level, that's 51,000 feet, that's about two to three thousand feet above some of the terrain.

Long term, we estimate six hundred sorties per month over White Sands. It is the best training area for us when we can get more sorties than we do. White Sands is a national test facility, it's operated by the Army under an agreement set up by the Secretary of the Defense. Its primary mission is missile research and development. We can only get on the range when we don't interfere with missile tests; therefore, the six hundred number for long term useage.

The other areas close to Holloman are used by other aircraft such as the AT-38, which also flies from Holloman, because they have shorter legs and can't go quite as far. In looking at other areas, the Pecos area, within range, is limited in vertical restrictions, such as airline traffic coming over the top. The Tombstone area is not available for enough sorties per month for us to use. That being down to two areas for our proposed extra supersonic sorties; that's the Valentine area in Western Texas and, of course, the Reserve Military Operations Area here in Catron County.

Before we decided on these we looked at some more alternatives, one of which was using Mexican airspace. We found the Mexican constitutional restrictions precluded us from using fighters over Mexican airspace.

Looking at establishing new airspace, again we looked at all the areas around Holloman in which to establish new airspaces and found the airspaces saturated with airways or already existing training. Using only the White Sands Missile Range and the Reserve Military Operations Area would not meet all of our training requirements because we feel we can only get about three hundred sorties here in Reserve. Other units use the training area for subsonic sorties and it would not be available to us. Using only the White Sands Missile Range and Valentine is an alternative we can live with. We can fly six hundred sorties down in Valentine. However, for operational reasons, and in order to spread the impact of sonic booms over more area, we would like to get supersonic flights in both Reserve and Valentine.

Changing the White Sands Missile Range priorities, as I said, it's a missile research and development facility run by the Army and we are unable to change the priorities. I would also like to point out the White Sands Missile Range is not all government owned. We do have supersonic flights over the northern portion which is over privately held property.

We looked also at weekend flying at White Sands. We found that, even with the weekend flying, we could not get enough sorties in order to meet our training objectives.

We took several actions in order to minimize the impact of the sonic booms. One, we designed the area to avoid populated areas to the maximum extent possible. We also set a 15,000 foot mean sea level for the area; that's six to nine thousand feet above the terrain out here. That means that any airplane flying in the Reserve Military Operations Area, under the supersonic proposal, would be at least a mile to a mile and a half from anyone on the ground.

And, finally, we located our primary maneuver area--which I'll show you in a minute--in the least populated portion of the Military Operations Area. You can see the area that was originally considered here and then some that was taken out in order to avoid population areas. And, finally, the primary maneuver area we've located in the southeastern portion of the Military Operations Area in order to impact the fewest number of people. There is a question of how we can maintain our position in the area. We can use either ground references or we can use the inertial navigation set which is the system of fixing the exact position of the aircraft over the ground, internally in the aircraft.

By using those positions we've set up on our training program, the actual supersonic flight can then be allowed to occur in the area that we designate.

And, finally, the future. The public commentary will end on the 4th of November. Up to that point, you can submit any written comments. They will be placed in the final environmental impact statement along with any oral comments you present tonight or any written comments that you present to the reporter tonight. Final impact statements will be sent to all federal, state and local agencies and interested individuals for comment.

At the end of the comment period, all the comments and final statements are submitted to the Secretary of the Air Force Office for a decision on the project. If the Air Force is allowed to fly supersonic, then there will be a thirty day waiting period before implementation of our proposal.

MAJOR GRAHAM: Ladies and gentlemen, that concludes my briefing. Thank you very much.

(Applause.)

HEARING OFFICER: Could we get the lights back on. There we go. They may not have been handed out as yet, that is, forms to those who might be interested in making a statement. Do we have the forms available?

All right. If you have not received a form and if you do desire to make a statement this evening, if you would kindly hold up your hand, and we will see to it that one is given to you. I see some hands up back here and on the bleachers as well.

(Forms passed out.)

Now these forms will be used in several different ways. One of the purposes is that I will use these forms when it comes to the time for statements to be made, I'll use these forms to call those people to the front. By your indications of whether you are representing a group or you're just speaking on your own, that, of course, will help me determine how long you are going to be allowed to speak. So it will be assumed you are speaking for yourself unless you have indicated on the form that you are speaking for some group or some organization and indicated the name of the organization.

While these are being handed out, I would indicate also that though we will be asking you to identify yourself each time you come to the podium, these forms will also assist to insure that we have the proper mailing address and those who have participated by making a statement, that address will be used to mail you a copy of the final environmental impact statement. Those of you who have not participated in any way and yet you might desire

a copy, you can obtain one, however, you will have to pay a reasonable fee for your copy. Once you have completed the form, if you would, please hold it up and I'll ask that those who have passed out the forms keep alert and go back and obtain them.

As I have indicated, we at this time are coming to the portion of the proceedings that deals with the questions and answers. Let me go into a little more detail with regards to these.

As I indicated before the purpose of this question and answer session is to allow you the opportunity to ask questions with regard to the Air Force mission as far as it relates to the proposal. Of course, you have just seen and heard a briefing with regard to the Air Force mission. And I would anticipate, of course, that your questions would be of the nature that would help to clarify this for you. Now it may well be that you have questions that relate to other areas, primarily, towards the environmental aspects. I would ask that you hold those questions and those questions will be allowed at the time statements are made. But the only questions that are to be addressed now are the questions, that we'll attempt to answer, will be those that relate to the mission. This does not mean that your other questions will ultimately be simply ignored because they will, of course, become a part of the final environmental impact

statement and will, of course, receive consideration. For those, when I call for the hands in a few moments, and if you desire to ask a question, again, if you will come to the podium up here by the court reporter, this will assist her and everyone else to hear the questions that you pose. The questions are to be posed to myself, although I do not anticipate being the one to answer them, I will then determine whether we have someone who is present representing the Air Force who can answer the question.

I would say further, with regard to the nature of the questions, that they should not take on the form of a statement or be lengthy in nature. As I have already indicated, this is a hearing. It is not for the purpose of a debate. It's certainly not a court proceedings. Therefore, it is not an adversary type proceedings. So I don't anticipate that the questions are going to be of a nature that would generate argument. It's not intended to be a cross-examination of Air Force personnel. It's intended to obtain information and to clarify matters.

I would like, before we start getting into this, to see if everybody has obtained one of the forms who desires one at this time, and that those who have filled them out have already held them up in order that they might be obtained. I can give everybody a chance to get seated again so that we can proceed in an orderly manner.

(Mr. Chavis delivered the forms to the Hearing Officer and they conferred briefly.)

At this time let me see a show of hands of those who desire to ask questions with regard to the Air Force mission. If you come up to ask any other question, I will ask that you reserve that to a later point.

All right, I see a hand back up here at the very back. Would you come up please.

MARY RUSSELL: My name is Mary Russell. I'm from the Dogie Ranch, north of Luna. I would like to know the statistics that are available of the number of planes that go down during these sorties, during the dogfights.

HEARING OFFICER: All right. She, of course, has asked a question with regard to the statistics as to the number of planes that would be expected to go down during a dogfight sortie. Do we have anyone who has that information available?

HEARING OFFICER: And I'll ask, of course, that the Air Force members follow exactly the same procedures, that they go to the podium, that they introduce themselves by name and rank, and, at least certainly the first time, indicate the position they hold.

MAJOR GRAHAM: I'm Major Graham, the Project Officer and the Wing Executive Officer. I can't give you the exact answer overall for the Air Force statistics.

I can give you an answer for Holloman, the 49th Tactical Fighter Wing. First, we have lost no aircraft training over Reserve. We've lost one F-15 in the last three years. The F-15 has the best safety record of any fighter in the Air Force inventory.

MARY RUSSELL: How long has this plane been in operation?

MAJOR GRAHAM: The F-15 since 1972--is that correct (addressing Colonel Stamm)?

COLONEL STAMM: Tests flights.

MAJOR GRAHAM: Test flights--

COLONEL STAMM: Operational in 76.

MAJOR GRAHAM: --and the first operational flights in 1976.

355 MARY RUSSELL: You say there has been only one in the last three years. What has been the overall number of planes? 355

MAJOR GRAHAM: As I said, I don't have the overall Air Force number.

MARY RUSSELL: Is there any way we can find this out?

MAJOR GRAHAM: Yes, I can. If you will give me your name after this meeting, I'll get it for you.

MARY RUSSELL: It will be here.

MARY RUSSELL: I think I have one more question.

HEARING OFFICER: Go ahead and ask the question. It may or may not be that Major Graham will be the one to answer. Go ahead and pose the question.

MARY RUSSELL: Is it possible that dogfights are obsolete?

HEARING OFFICER: Do we have an answer as to that question?

MARY RUSSELL: There are such things now as heat seeking missiles and killer satellites and so on and so forth.

COLONEL STAMM: I'm Colonel Stamm. I'm the Director of Operations of the 49th Wing. Your question is a good one because that's exactly the reason we need to practice supersonic flights. No, dogfights are not obsolete. Yes, there will always be a need to run two airplanes together to practice the turning maneuvers that have to happen. But the best way to do that is at supersonic speeds. That's exactly why we need practice at supersonic speeds in this airplane.

MARY RUSSELL: Thank you.

HEARING OFFICER: Thank you very much. I see a hand right down here. Yes, please.

BARBARA ROTHMAN: I'm Barbara Rothman from Glenwood and I would like to ask you: Can any of these missions be done via computers, simulations, the way the astronauts were trained?

HEARING OFFICER: All right, do we have anyone who can respond to that question?

COLONEL STAMM: I might just stay up here for a minute. Yes, they can be and, yes, we do simulate many of those. But that is just a portion of the training that goes on. We do have a simulator at Holloman. We train on it daily. We run it twelve hours a day as a matter of fact. And we run pilots through it constantly. We have a required number of sorties they have to practice in there. But simulation lacks a certain amount of training that needs to be done in the air. Consequently, we cannot simulate the entire training requirement. Yes, we do simulate though.

BARBARA ROTHMAN: Can you increase the amount of simulation that you are using since there is a question of health effects, et cetera, of these flights over people?

HEARING OFFICER: Can everyone hear the question? Would you state your question again so the others can hear it and come up closer to the microphone please.

BARBARA ROTHMAN: Can you consider increasing the amount of computer simulation that you do use in your training since there is a possibility there is a question about the health effects, et cetera, of the sonic booms caused by the dogfights?

COLONEL STAMM: There are two limitations. The simulator equipment we use it for the maximum amount of time available at this point. The other limitation is there is only a certain amount of this that you can simulate effectively. At that point you need to get into the airplane and do it for real. Yes, you can; but you cannot simulate the entire situation, no.

HEARING OFFICER: Thank you very much.

HEARING OFFICER: Is there another? I'm sorry. Yes, please. It might help, if along with giving the name and general location, it might help if you give your mailing address, if you do not object to doing so.

ALONZA SMITH: My name is Alonza Smith and I live in Apache Creek on Apache Creek Route out of the Reserve post office and the zip is 87830.

My question is concerning an explanation of the ellipse that we were shown on the screen. Is there any one of you people who could explain what the combat maneuvering means within the ellipse that you have shown?

HEARING OFFICER: All right, do we have a member of the Air Force team who can approach that question?

MAJOR GRAHAM: Would you repeat that question please.

HEARING OFFICER: I might note that this is Major Graham.

MAJOR GRAHAM: I'm sorry. I'm Major Graham from the 49th Tactical Fighter Wing.

ALONZA SMITH: Major Graham, on your screen you showed some ellipses. Could you please explain the combat maneuvering that will take place within the ellipses and why the ellipses are there. Many of us don't know.

MAJOR GRAHAM: The ellipses resulted from some of the testing we've done to determine exactly where our aircraft do fly supersonic, given the fact they have the freedom to maneuver. The aircraft, we found out, when it started out, perhaps, forty miles away, as they closed in towards each other, they would accelerate to supersonic speeds. There may be some turning in which they would decellerate to subsonic speeds and then, perhaps, re-accelerate to supersonic as they extended away from each other, as they went out of the fight. The ellipses, by tracing the maneuvers, we determined that the ellipses show where the sonic boom pattern would fall, the inner ellipse of the supersonic flight. The outer ellipse is essentially the edge of any noise activity.

ALONZA SMITH: So then, according to the ellipses, then anybody living out of the ellipse area, the outer ellipse area would not hear any sonic booms--is that correct?

MAJOR GRAHAM: We plan to do most of our maneuvering within the ellipse area. There may be some supersonic flights outside that area. So there is a possibility of a sonic boom.

ALONZA SMITH: Well there would have to be supersonic flight outside the area in order to get to it.

MAJOR GRAHAM: No, ma'am, not necessarily.

ALONZA SMITH: Not necessarily. Thank you.

HEARING OFFICER: Thank you very much. All right, I see another hand right back here, yes, sir.

CHARLES BREIDHAUPT: Charles Breidhaupt, Post Office Box 617, Reserve, New Mexico.

Likewise, why can't they use the areas around White Sands for their testing rather than expanding the area all the way through Reserve?

COLONEL STAMM: I'm Colonel Stamm. The fact is that we do use the area around White Sands to the very maximum extent possible. And we would prefer to use the area around White Sands because it is closer and, consequently, we can get to it faster and accomplish more training. The reality is though that we have very low priority on using that air space and we cannot accomplish all our training there. So we have to go to the other areas to accomplish our training. That's the whole answer. We would prefer to train there, definitely; however, due

to the test priorities and range scheduling priorities, we do not have enough training time on the White Sands Missile Range to be able to accomplish all our training.

CHARLES BREIDHAUPT: One other question. Are there other areas that would be closer to White Sands that could be used other than the Reserve area?

COLONEL STAMM: No, sir. As Major Graham showed you on the map, we've looked at all the areas that are available and we've looked at the possibilities of originating new areas. And it's not feasible to try that. The best approach is the one we have come up with thus far.

CHARLES BREIDHAUPT: Thank you.

COLONEL STAMM: Thank you.

HEARING OFFICER: Let's see, I think the gentleman back behind you there had his hand up earlier.

JERRY YOCUM: My name is Jerry Yocum. I'm a property casualty insurance agent with offices in Reserve.

I also have ten years experience as an insurance adjuster and I know the difficulty of ascertaining the actual cause of damage to property after arriving three or four or five hours after this thing has occurred. My first question is: Does the Air Force intend to put in Reserve, or in the Catron County area, a risk management specialist who will assist the people in the county with any property claims that they may have?

LT COL STINE: I am Lieutenant Colonel Stine from the legal office at Holloman Air Force Base. The answer to your question, sir, is: No, we would not station someone here specifically for that purpose.

JERRY YOCUM: Can I ask you, in what manner you would then proceed to handle any supposedly property claims arising from sonic booms?

LT COL STINE: Yes, sir. Anyone who has damage which they feel has been caused by a sonic boom can submit a claim to our office which we would then investigate, adjudicate and settle in accordance with the terms of the Military Claims Act, which is the federal statute governing such claims.

JERRY YOCUM: During the last three years could you tell me how many claims you have actually paid?

LT COL STINE: No, sir, not exactly. We have paid some. We have denied others.

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JERRY YOCUM: You have no idea of the number of claims?

LT COL STINE: I could not give you the exact number at this time. I could get it for you though.

JERRY YOCUM: I would appreciate that. Thank you.

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HEARING OFFICER: Thank you. I believe we had another hand.

DAN CAMPBELL: My name is Dan Campbell, Route 10, Box 440, Glenwood, New Mexico.

I would like to have some information regarding the use of the ellipses, if one of you wouldn't mind giving us some idea of the speed of the sonic-- I just thought you might be able to give us that information. The speed the aircraft would be traveling inside the ellipses and what their size would be. How big are the ellipses? How fast do the aircraft go?

MR. CHAVIS: My name is Al Chavis. I'm from Headquarters Tactical Air Command, Langley Air Force Base, Virginia. If I understand your questions, sir, you are asking what are the physical dimensions of the ellipse?

DAN CAMPBELL: Yes.

MR. CHAVIS: The inside of the ellipse is approximately twelve by eighteen nautical miles.

DAN CAMPBELL: How fast do you expect that most of the aircraft will be traveling at the time they will be doing the maneuvering involving supersonic flights?

MR. CHAVIS: From studies that have been conducted on the east coast in the Oceana Military Operations Area, which is also Warning Area 72, used by the 1st TAC Fighter Wing at Langley Air Force Base, we found that the average mach number is about 1.1. We do have the aircraft ranged from airspeeds down to as low as a hundred and twenty knots all the way up to--in one of the studies we looked at, it was 1.5 mach.

DAN CAMPBELL: How fast is mach 1.1 and 1.5?

MR. CHAVIS: I can't answer that.

DAN CAMPBELL: What is one mach, 1.0, the speed of sound?

MR. CHAVIS: That, at ground level, is about eleven hundred feet per second.

DAN CAMPBELL: Eleven hundred feet per second. Could somebody give us some idea, roughly, in miles per hour?

(VOICES FROM AIR FORCE TEAM) Six hundred--seven hundred.

DAN CAMPBELL: Seven hundred miles per hour?

(VOICES FROM AIR FORCE TEAM) Six hundred--seven hundred.

DAN CAMPBELL: We're talking about something that's seven to probably nine hundred miles per hour, in an ellipse that's twelve to eighteen miles. I would like to have some idea of the reaction time, the human reaction time, as well as the aircraft's reaction time, to a need to change course or recognize a boundary or what not. At one time, in fact a few years ago, three years ago, I was told it might be at 1.5 mach, which they thought, at that time, was somewhat standard for some of these operations, that it might require thirty-three miles to actually change a course over the time when a pilot had a need to. Is there someone here qualified to tell us if that's something like realistic?

COLONEL STAMM: If I might by way of clarification-- First of all, I'm Colonel Stamm once again. The ellipse that we are talking about was determined by starting with a point at one end of the area and a point at the other end of the area that a fight would commence from. And, assuming that they're commencing from similar points, the most likely point of supersonic and merge of the two airplanes is going to be somewhere within that ellipse. That's basically what's being described. As far as the thirty-three miles to turn, I don't understand that. It doesn't take anywhere near that far for an F-15 to turn at supersonic, at 1.5, and, incidentally, supersonic mach one is six hundred and seventy-two knots, I believe. So 1.1, one mach one, the amount of travel is something over seven hundred miles per hour, about seven-ten, if I'm not mistaken. At 1.5, we're talking about a thousand, eleven hundred miles an hour.

DAN CAMPBELL: So we're talking about something like about ten miles per second. Would that be roughly--

COLONEL STAMM: Ten miles per minute.

DAN CAMPBELL: Ten miles per minute?

COLONEL STAMM: Yes.

DAN CAMPBELL: The ellipse, if I understand you, is a statistical area of frequency of number of sorties that are going on inside of a given area?

COLONEL STAMM: That's assuming that, if we take a common point at the other end, and that's the most logical common point to start with for air combat training in these areas, considering the merge, the ellipse will pretty well describe where this supersonic flight will occur.

DAN CAMPBELL: So the statistical frequency is around eighteen miles you're likely to have most of the dogfights?

COLONEL STAMM: Yes.

DAN CAMPBELL: I'm curious to know, does that preclude dogfighting from going on, or a supersonic flight from going on outside the ellipse? Obviously not.

COLONEL STAMM: No, it does not.

DAN CAMPBELL: As you see it, do all the dogfights and all supersonic flights have to end with the actual borders of the MOA, the Reserve MOA as it's drawn?

COLONEL STAMM: Yes, they do. They will stay within the MOA.

DAN CAMPBELL: Is it a fact that the DEIS stated that, at 1.4 mach, an aircraft traveling at forty thousand feet, the sonic boom will travel fourteen miles laterally, or twenty-eight miles in total, fourteen miles on either side of the flight track?

COLONEL STAMM: You're getting a bit out of my field of expertise. I believe the report said something to that effect.

DAN CAMPBELL: Is there somebody here that could verify that, in fact, at forty thousand feet--

HEARING OFFICER: I think that the question is getting into those areas that I indicated could be reserved and made at the statement time, and would not be raised at this particular time.

357 DAN CAMPBELL: Well, actually, what is my point, the question that I've been leading up to: Is in fact the area that's about to be impacted by sonic booms in fact an area that's fourteen miles larger on every side of this military operation area? I think it is. And, if that's the case, you're encroaching on a whole lot of--or impinging upon a whole lot of other types of people and places than those described in the DEIS. 357

HEARING OFFICER: All right, sir, I think what you've ultimately ended up doing, of course, is asking a statement--or making a statement, which is fine, at this point, but--

358 DAN CAMPBELL: I wonder if there is anybody in this panel that could concur that, in fact, sonic booms will be heard and could be heard outside of the MOA as is drawn in the DEIS? 358

HEARING OFFICER: Sir, we will not go into that. Thank you very kindly.

(Applause and yelling.)

HEARING OFFICER: Now let me indicate that this was not to ignore the questions or either the statement that he made. These are, again, matters that will be considered ultimately in the evaluation. And I have simply requested that statements or questions of this nature simply be reserved to the appropriate time. That's all that I have requested.

HEARING OFFICER: All right. We have a hand by a young lady back here, please.

HEARING OFFICER: Would you please state your name and address please.

ARIANA KLINKOR: Right now there are some places--

HEARING OFFICER: Will you please state your name and your address.

ARIANA KLINKOR: I'm Ariana Klinkor, P.O. Box 214, Reserve, New Mexico.

Right now, they're having some booms at high altitudes right now. When the booms start being held at lower altitudes, how much difference in noise will there be? 359 656

HEARING OFFICER: I'm not sure-- Of course, here again, you're getting into asking a question that relates more to the environmental aspect. It might be the type of question that we'd ask it be held until the statement portion of the proceedings. I doubt if we have an answer for that.

HEARING OFFICER: Apparently not. Thank you for the question. It will be made a matter of record.

(Inaudible question from the floor.)

HEARING OFFICER: I will not consider a question from the floor, from the audience.

(Laughter.)

HEARING OFFICER: So do we have a hand? And I would indicate that the only questions that are going to be acknowledged at this time--I've stated it already--and I think it is understandable as to what the proceedings are. And so there's no need of raising something as to why it's not being done differently because I'm going to accept questions that relate to the mission of the Air Force. If you have a question that relates to the environmental aspect, indeed, there is an appropriate time for those questions and they will be made a part of the statement proceedings. So do we have another question that relates to the mission?

EARL WYNN (phonetic): My name is Earl Wynn. I live at what you call the "Y" just out of Reserve.

The question I have is what type of performance is it going to be out of Holloman Air Force Base? Is it going to be a scramble effect like the old days or is it going to be a scheduled effect where they go to a certain area to meet this so-called enemy? Is it going to be several times a day, at night? Is it a day and night thing? Is it a saturated thing? I would like to know.

COLONEL STAMM: There are several questions there. Let me address them one at a time, if I might.

HEARING OFFICER: Let's indicate--is that Colonel Stamm?

COLONEL STAMM: I'm sorry. Colonel Stamm. First of all, we fly into Reserve almost on a daily basis right now. I have two airplanes on alert status right now, air defense alert status, that we do scramble almost daily. And they normally come to the Reserve airspace and fly in Reserve. Other than that, we do schedule aircraft that would be coming to Reserve. The answer to your first two questions is, yes, to both. We do scramble them and, yes, we do schedule them. I would not expect to see any massing of airplanes coming to Reserve. We would normally do that type of flying in the White Sands Missile Range. And what we're actually looking at, as far as use of Valentine and Reserve areas is over flow training that we cannot do at the White Sands Missile Range. Did I answer all your questions?

EARL WYNN: That's what I wanted to know, thank you.

HEARING OFFICER: Thank you, sir.

HEARING OFFICER: We have a hand back in the back.

SALLY CAMPBELL: My name is Sally Campbell. My address is Rural Route 10, Box 440, Glenwood.

And I'd like to ask someone the question. It was shown on the screen earlier that weekend flying was a possibility. And I'd like to know now whether there is any flying that happens, supersonic flying that happers in the White Sands Missile Base after five o'clock and before nine o'clock in the morning and whether you are using it on weekends at this point; or whether perhaps that's a large space of time, available flying time, that's not being used at this point.

COLONEL STAMM: By way of answering-- I'm Colonel Stamm again. By way of answering the previous question, we do not intend to use either Valentine or Reserve at night. I believe that was part of the question. There seems to be some misperceptions on how we do business. Our day normally starts at around four o'clock and we usually finish up somewhere around, well, when we're not night flying, around eighteen or nineteen hundred, or six or seven o'clock in the evening. We use the airspace throughout that period and we spread our day out to that extreme. I'm talking about fifteen to sixteen hour days. And we spread it out to that extreme so we can take maximum advantage of the airspace that is available at White Sands. As far as weekend flying, when we're extending ourselves on a daily basis to that extent, we have to give our people some time off. Even though we don't fly on weekends, they do maintenance on the airplanes on weekends. And that's when they catch up on their portion of the business.

An additional problem is, there is a considerable amount of testing that does go on at White Sands Missile Range, even on the weekends. So the ranges are not empty by any means and we wouldn't have just free total access to the ranges.

SALLY CAMPBELL: Thank you.

HEARING OFFICER: Thank you very much. Okay, we've got a couple of hands over here. Yes, sir.

BILL KOETHKE: My name is Bill Koethke, Box 661, Reserve.

I would like to ask you if there is non-supersonic flights taking place at White Sands and that you're asking to do supersonic flights here in Catron County?

HEARING OFFICER: Can anyone respond to that question?

MAJOR GRAHAM: My name is Major Graham. There is some non-supersonic flying done at White Sands. The other aircraft from Holloman use portions of the White Sands Missile Range for air-to-ground training, teaching their young pilots, who are coming into fighters, how to drop bombs. They drop practice bombs out on the range. We have divided up the airspace so that we can fly supersonic over the top of the air-to-ground ranges and therefore we can use the airspace for both types of training, so the supersonic flying does not interfere. We also fly non-supersonic missions at night over White Sands.

HEARING OFFICER: Thank you very much. We had another hand just a minute ago.

OWEN LORENTZEN: My name is Owen Lorentzen, Route 10, Box 462, Glenwood, New Mexico.

If you did not have the training wing at Holloman, would there be enough areas to fly the F-15, like in Beak, Talon or White Sands Missile Range?

COLONEL STAMM: Colonel Stamm. The Beak and the Talon areas are subsonic areas. So the training wing really has minimal impact. Those are the areas that they normally fly in when they are subsonic. The White Sands, the area north of Holloman and to the west of Holloman, is the only supersonic airspace and we use that and the training wing does not, except, as Major Graham mentioned, one portion of it is an air-to-ground range, but they train underneath our supersonic training.

OWEN LORENTZEN: How about the McGregor Range?

COLONEL STAMM: McGregor is not supersonic and we're seldom allowed to fly in there, as a matter of fact, because it's so close to the El Paso airways.

OWEN LORENTZEN: Is the McGregor Range a restricted area?

COLONEL STAMM: Yes, it is, for the subsonic.

OWEN LORENTZEN: Could any of these areas be upgraded to supersonic?

COLONEL STAMM: I'll let Major Graham answer that.

MAJOR GRAHAM: I'm Major Graham. McGregor Range is owned and operated by Fort Bliss out of El Paso. It is presently subsonic. We could go through the same procedure to upgrade it to supersonic as we're going through here tonight. The major problem with McGregor, from our point of view, is that it is too small.

OWEN LORENTZEN: And you only need an area ten by twelve miles; is that what you stated earlier?

MAJOR GRAHAM: No, sir, I didn't. I said that's where the supersonic flying occurs. As I said in my briefing, an area forty by fifty miles is your optimum for training.

OWEN LORENTZEN: This is so you approach and then you do your actual dogfighting in an area ten by twelve miles? Is that correct?

MAJOR GRAHAM: Most of the supersonic flying actually occurs in that twelve by eighteen mile ellipse. So at approximately twenty miles from each other, the aircraft accelerates to supersonic speeds.

OWEN LORENTZEN: How about the Pecos area, if you exclude the populated area?

MAJOR GRAHAM: The Pecos area we looked at. The problem with the Pecos area we found the airliner routes running over the top. It restricted the area vertically to very low altitudes and we could not get the type of training we need.

OWEN LORENTZEN: I understand the type of training you need is at low altitude where you have maximum performance of your aircraft.

MAJOR GRAHAM: Would you specify what you mean by low altitude.

OWEN LORENTZEN: Well, would it be below where the airliners are flying at?

MAJOR GRAHAM: The airliners normally operate thirty-three to thirty-seven thousand feet.

OWEN LORENTZEN: And in this area you want to come down to fifteen thousand; is that right?

MAJOR GRAHAM: That's correct and operate up from fifteen thousand to fifty-one thousand.

OWEN LORENTZEN: Somewhere in the book I read that, once you approach and start your dogfight though, you drop in altitude so you get the maximum use of your aircraft. That's why you want to practice at a low altitude in the first place.

HEARING OFFICER: So what is your question please, sir.

OWEN LORENTZEN: Why haven't they considered upgrading some of these other areas instead of just the Reserve MOA?

MAJOR GRAHAM: Okay, the answer to your question is, we did consider each of those areas in detail. In the briefing, I specified we found Valentine and Reserve both met our requirements.

OWEN LORENTZEN: Well, I think you better come up with some better reasons.

HEARING OFFICER: I believe we had a hand back here.

TANYA LORENTZEN: My name is Tanya Lorentzen, I live at Star Route 10, Box 462, Glenwood.

I have two questions. The first one: Fifteen thousand feet, you say, is where they are going to do the booms. Is there chances of them dropping lower than fifteen thousand? The mountains around here are ten thousand feet. A lot of people do hiking, or ride horses, and work stock at ten thousand feet and fifteen thousand is real close. And I want to know, what are the chances of them dropping lower than fifteen thousand?

COLONEL STAMM: When we do this training, since we're operating with-- I'm Colonel Stamm once again. When we do this training, since we're operating with very expensive equipment, we operate by very strict rules. And we set a floor to the area that we will not fight below because if we do fight below it, we stand a chance of making a mistake and in fact losing an aircraft. It's just too expensive to lose. So we have what we call "rules of engagement" and we adhere to those rules very closely. If someone is going below the floor that we're supposed to be fighting at, we stop that fight right now.

TANYA LORENTZEN: So do you know at Holloman when that happens? I mean, is it a computer thing or is it that somebody has to report them if they do drop below fifteen?

COLONEL STAMM: There are at least two individuals involved in that fight and at least one of them is going to know that the other one has gone below the floor. As soon as that happens there's a "knock it off" call. Fifteen thousand as opposed to ten thousand feet, we're talking about a mile of separation also. I think there's often some confusion with low level flying airplanes where you can tell the color and see what the tail numbers are and that sort of thing is often confused with the type of mission we're talking about. We do not get that close to the ground. You cannot tell what the tail number is or very readily what the color is of an F-15, a mile away or two miles away.

TANYA LORENTZEN: Of course, the sound might echo in the canyons and all that too. And then my other question is approximately-- I live in Glenwood, you know. How many loud booms are we, you know, will we average in a day, let's say, after, you know, six months? You know, when you start doing it, if you do. Hopefully you won't. How many booms are we going to have to-- you know--so we kind of know. You know, are we going to have twelve a day or is it twenty-four or--

COLONEL STAMM: There's really no way to quantify that. It depends, as I said, what our proposal is, what our consideration is for Reserve and the Valentine airspace, is using it as an overflow piece of airspace for the training that we can't do at White Sands.

TANYA LORENTZEN; So you have no idea?

COLONEL STAMM: So there are varied, there are several things that impact that. We have three squadrons at Holloman. Very often one of the squadrons will be deployed, much as one just was to Europe for an entire month. During the period that they're gone, we have enough airspace to train in with the remaining two squadrons. So for that month period, there would probably be zero use of Reserve, or very low. At other times, if we have all three squadrons at Holloman and the test activity is very high out at White Sands Missile Range, then there might be greater use of both Valentine and Reserve during those periods. I cannot quantify or give you an exact number because there is too many variations.

TANYA LORENTZEN: So, at the most, how much, do you have an idea, approximately, at the most that we would experience?

COLONEL STAMM: I'm sorry, I can't really quantify that I'm afraid. The other part of that is that if they didn't go supersonic, you may not even hear them, that's the other thing.

LARRY TACKMAN: I'm Larry Tackman from Glenwood. I would like to mention to the audience that we have some detailed predone comments that we'd like to have made and the colonel already has mentioned that we can have questions during the comment period. It would be very appreciative if we could move into the comment period.

HEARING OFFICER: I was going to allow, sir, a few more minutes and then we would consider moving into the statement period. I do want to give those of you who have questions, again pertinent to the mission, an opportunity to voice those, but, obviously, at some point we will have to call a conclusion.

HEARING OFFICER: Do we have-- All right, there's a hand right here.

E. H. ROBBINS: My name is E. H. ROBBINS. I'm from Dixie Valley, Nevada. And we haven't heard you boys yet, so I'm not jumping all over you for sonic booms. I hate to have you get up and run back and forth. But what I would like to ask you-- I read part of your DEIS. We have a problem in our area with the Navy which is interservice rivalry, and I will get into more of that. The definition, out of your text, of a dogfight, "a three dimensional aerial battle between two or more aircraft."

I used to work for the Air Force. I have done a lot of work in electronics in arming and disarming the F-111s, F-106s, 100s, 105s.

On aircraft, in a dogfight, it seems to me what I've heard so far, is that your aircraft operational is somewhere--or its best maneuvering is between ten thousand and the ceiling of probably forty-five or fifty thousand at a mach speed of 1.5. An aircraft--two aircraft approaching each other at 1.5 mach are traveling somewhere around a closing speed of between sixteen and thirty-two miles per second. Now the question is--which I have seen already are valid from the F-111F--that there doesn't seem to be too much room that you people can actually come up and stay in a confine between twenty miles and thirty miles. We have watched the aircraft and we know they can't do it. We have even talked with pilots who they themselves have not. So I was wondering how you can come up in a DEIS and make a statement that they will stay within that confine, where I've seen it in actual application that it has not.

COLONEL STAMM: Colonel Stamm. By way of correction, it is not thirty-two miles per second. It would be thirty-two miles per minute. If we're traveling fifteen hundred miles each, roughly, a minute would take you the other fifteen miles. So from mach to minus T you'd come up with thirty miles per minute.

By way of clarification, at the start of the fight, that aircraft is not going to be supersonic.

One of the unique things about the F-15 is its ability to accelerate at extremely rapid rates. So, as we start the fight, we would be at high airspeed, but we would not be supersonic. As we call the fight on, we're going to have to accelerate. So that at the point of the merge, we would be at that airspeed--not all the way into the merge.

The other point of clarification I need to make is that we cannot compare the F-111 mission with what the F-15 does. The F-111 mission is a low altitude high speed penetration type mission. The F-15 mission, once again, is a high altitude air superiority mission.

E. H. ROBBINS: Are you talking of an altitude somewhere between ten and forty thousand feet?

COLONEL STAMM: Yes, sir. The aircraft has the capability of going from ten thousand to fifty thousand feet in a heartbeat. So what we do--in answer to the Pecos question that was being asked previously, normally, the Pecos area is capped at twenty-three thousand feet and we have a base anywhere between ten and fifteen thousand feet. So we have an eight thousand foot altitude block to work in. When we are actually training, we need over twenty thousand feet to even be able to maneuver the aircraft appropriately.

E. H. ROBBINS: But, still in a vertical sense, we're talking in miles, statute miles. What we've experienced so far in our valley is that they haven't been able to stay with it.

I'm not jumping all over your DEIS, but I'm just saying, in practical application, when two combatants are traveling at that rate of speed, georgraphically, underneath them, is irrelevant.

HEARING OFFICER: All right, sir, if you have a question with regard to that, fine. But I can see you're getting into making a statement and I'm going to close off the questioning that we will respond to in about another ten minutes. And the questions that will be permitted at the time the statements are made, there will be no responses to those questions. Of course, you may make those questions with regard to the mission or any other thing. I'm going to allow about ten more minutes to the hour and that will be all the questions we will respond to.

HEARING OFFICER: Yes.

JOHN MARSHAM (phonetic): My name is John Marsham. I'm from Glenwood, Box 85. I would like to know if you could tell us what the disadvantages of not flying in Catron County would be.

HEARING OFFICER: Is there anyone who is in a position to respond to that question?

MAJOR GRAHAM: If I understand the question. The disadvantages of not flying in Catron County?

JOHN MARSHAM (phonetic): Yeah, could you tell us what would be wrong if you guys didn't fly here? What would happen if you didn't fly here?

HEARING OFFICER: This is Major Graham?

MAJOR GRAHAM: Major Graham. If we have a training requirement for about twelve hundred supersonic sorties per month, and out of that, we average six hundred on the White Sands Missile Range, that means we need six hundred more to actually achieve the proficiency levels that we feel are necessary in order to be ready to go to war. It doesn't mean we're not ready to fight. It just means we don't reach the desired level of proficiency. So anything we lose is falling short of the mark.

HEARING OFFICER: I see a hand back here. Yes, sir.

ROBERT PERKINS: Robert Perkins, Box 445, Mogollon. Given the need for twelve hundred sorties a month and your average of six hundred a month, what I'm saying, is there a potential for--

HEARING OFFICER: I think you may need to speak up. Some of them may not hear you.

ROBERT PERKINS: Is there a potential for activity, nonflying activity at White Sands to increase to where you would have to, where you'd say, be getting only two hundred sorties a month out of White Sands, and having to shift that increased number to either Valentine or Reserve?

COLONEL STAMM: I don't see that as a reality because what we're talking about right now is a projection. We're simply looking at what the use at White Sands is going to be in the future and we're projecting we're going to be limited to about six hundred sorties on White Sands.

If I could answer the previous question: What happens if we don't fly in Catron County? In addition to what Major Graham had to say, I think our concern is: What happens if we don't fly supersonic? What happens if we don't train in the aircraft in the manner that we need to? I made mention when we talked at Valentine a couple of weeks ago, that we've gone into many, many wars ill prepared to be there.

The First World War we weren't really ready. The Second World War, I can still remember seeing news reels of people training with wooden guns and being put out to battle not properly prepared. The people that came out of World War II and went into Korea were still a fairly strong cadre of individuals and we did extremely well in the air war in Korea. When we went to Southeast Asia, the one that I am most familiar with, we did not get a very good opportunity to train. As a matter of fact, we weren't even allowed to go out and dogfight. Consequently, our kill ratio in Southeast Asia

was no where near what it should have been. That is the bottom line and that is the reason we're saying we need to have airspace to train in an appropriate manner.

HEARING OFFICER: All right. We have a hand back here.

REPORTER: Would you repeat that please.

HEARING OFFICER: Move a little closer to the microphone.

CALLEY GILMORE (phonetic, barely audible): I'm Calley Gilmore, P.O. Box 617. You guys said you do nonsupersonic flying at White Sands, why can't you do your nonsupersonic flying here and your supersonic flying at White Sands?

COLONEL STAMM: I'm Colonel Stamm again. I think you misunderstood. The flying we do at White Sands is supersonic.

CALLEY GILMORE: He said you also did nonsupersonic.

COLONEL STAMM: The training wing. There are two wings at Holloman. There's a T-38 training wing that we bring new pilots into the tactical fighter business in. And part of what we teach them is how to bomb from an aircraft. And that portion of the training is subsonic and it is done on the range on White Sands. But all the training we do in the F-15 on White Sands is supersonic.

CALLEY GILMORE: What are the health effects of the booms?

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HEARING OFFICER: Pardon me. What was the question?

CALLEY GILMORE: What are the health effects of the booms?

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HEARING OFFICER: I think that's the type of question again if you would please reserve it for the statement portion of the proceedings. Thank you.

(Inaudible question from the audience.)

HEARING OFFICER: I will not receive any questions from the audience. I will entertain two more questions and that will be all as far as those that will be responded to. I would indicate that the questions you do pose do become a matter of record. And it is my understanding those questions will be addressed. However, they will not be addressed here in this proceeding.

HEARING OFFICER: Yes, sir.

RANDY FABRES: My name is Randy Fabres, Route 10, Mogollon, New Mexico. And I would like to know why it is more logical to stir up two communities with your sonic booms than just the one. You did say Reserve wouldn't be the only place, but Valentine would be acceptable, but why does it make more sense to stir up two communities?

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HEARING OFFICER: I'm not so sure, sir, that that one is one that has to do with clarifying the flying mission, such as the kind of questions we have been entertaining. That one is like some of the others that have been asked already. It will be a matter of record and, as I say, I would anticipate they would be responded to. But I don't think that question is one that relates to the mission of the 49th Tactical Fighter Wing.

RANDY FABRES: Thank you.

HEARING OFFICER: I'll take one more question. Yes, ma'am. This will be the last question that we will receive at this time.

LINDA BREIDHAUPT: Linda Breidhaupt, P.O. Box 617, Reserve. This question is directed to you. You're representing the U.S. Air Force, correct?

HEARING OFFICER: I am here as the Hearing Officer and, certainly, I'm a member of the United States Air Force.

LINDA BREIDHAUPT: Okay, my question is: How come we do not have a representative, representing the community of Reserve?

HEARING OFFICER: I'm sorry, that is not really, as I explained initially, what the purpose of the hearing was.

LINDA BREIDHAUPT: No, but what I'm saying: Why do you make the decisions what questions are going to be answered and which ones aren't? I mean, we are the people who are going to be affected by the sonic booms. I think we should have somebody up there representing us.

HEARING OFFICER: That is what we are here for to obtain your statements. And your statement, of course, with regard to it, will be a matter of the record.

LINDA BREIDHAUPT: Yeah, but why should all the decisions be put up to you as Air Force?

HEARING OFFICER: I'm not even going to attempt to respond to the question.

LINDA BREIDHAUPT: Well, then I just don't think this hearing is fair. You aren't letting us state how we feel and you're not answering our questions.

HEARING OFFICER: In just a moment I am going to open into the statement portion and you, of course, have in effect made a statement, though you have put it in the form of a question. And the statements of this nature, or whatever you may desire to voice, will become a matter of record and this is what the proceedings is for, is to give you a chance to speak. Not necessarily, as I explained from the very beginning, an opportunity for the Air Force to respond back. And I have made that clear from the very beginning that was not the purpose of the proceeding. Your statement, I thank you for it, and I will

not make any effort to respond to it. I appreciate your comments and your thoughts and it will become, and, in fact is, a part of the record. Thank you very much.

(Applause.)

(END OF QUESTION AND ANSWERS PERTAINING TO THE MISSION OF THE AIR FORCE.)

HEARING OFFICER: As I was just indicating a moment ago, this portion of the hearing is for the receiving of the oral statements that you desire to make. And you, of course, will be given a particular time limit in which you are to speak. The primary purpose of this, obviously, is because there are a good number of people who want to speak. This will give everyone an opportunity to do so. As I suggested, also earlier, that the significance of the things that you have to say--certainly, you can say whatever you will. But if you are concerned with what is going to be done with it and what is going to be of the most significance, then it's going to be those types of statements which are factual in nature that will lend themselves to evaluation and that which individuals can take and determine whether or not they have an impact upon your environment and, if so, in what nature. And once again, we will go through the same procedure. That is, we will ask that each individual, as your name is called, that you come to the front, to the microphone, and that again, you state your name and your address.

And we will start out with allowing five minutes for individuals to speak who are speaking simply as an individual and allowing ten minutes for those that are speaking on behalf of an organization.

Now if it turns out the number who desire to speak is much larger than what is indicated at the present time, it may be that we would need to reduce that time by a few minutes with regard to the speakers. We have a time keeper that has been designated. He will give you a warning indicating that you have one minute left to speak and then, of course, we will advise you when your time is completely up. If you do not wish to make an oral statement, but you have a written statement, then, of course, if you would submit the written statement, then it will be attached to the proceedings. Or it may be that you have a written statement and you desire to read it and still have that statement attached and, of course, certainly, we will comply with your wishes in that regard.

Now, as I have indicated already, no response will be made during this meeting to the statements that you make or to the questions that you might pose during this particular portion of the proceedings. As I have also previously stated, it is my understanding that the questions that are posed, will be addressed to the evaluation of the input that you have made this evening.

I would also indicate that any statements you make, the fact that the Air Force or no representative of the Air Force responds to those, is not to be taken as an indication of an Air Force position either for or against what you may have had to say. Thus the Air Force may disagree

or may agree with what you have said. But the fact that there is no response should not be taken as any kind of an indication on behalf of the Air Force.

Now we have a number of individuals who are here among our dignitaries and we're going to give them the opportunity to speak first. And then I will proceed down through the list of names as I have been given. And, as I call your name, if by any means I do not indicate it correctly, then certainly I indicate my apology to you in advance and I would ask, certainly, that you correct me as you come to the podium. Now the order in which I call the names, likewise, if it seems in the order, perhaps, it should be slightly different, again, it is not any intention on my part of slighting one individual or another as far as the order in which the names are called.

I'm going to ask that, first of all, the representative for the governor, if he would be our first speaker this evening. Mister John Ramming, if you would please.

MR. JOHN RAMMING: Colonel, thank you.

Let the record show I am John Ramming, Director of Special Projects, Legal Affairs, Office of the Governor of the State of New Mexico.

Colonel, ladies and gentlemen, I apologize for the governor's inability to be here tonight. He is down in the southern part of the state. The record will reflect that the governor has initially been very concerned about the time for the public to respond, first to the DEIS, and then to the revised DEIS.

This project, or proposed project is of great concern to this area and of great concern to the governor. We, additionally, for that reason, joined in with the County and with the Senator asking for an extension of time. That was granted which we appreciate. The governor will, after reviewing the DEIS, respond in writing.

Thank you.

HEARING OFFICER: Thank you very much, sir.

HEARING OFFICER: At this time I would ask that Mister Michael Alguin if he would please speak on behalf of U.S. Congressman Bill Richardson.

MR. MICHAEL ALGUIN: Colonel, my name is Michael Alguin and I am here representing U.S. Representative Bill Richardson. I have a statement which he has prepared and I will read it like it has been prepared.

Unfortunately, I am unable to be present tonight to personally testify regarding the Environmental Impact Statement for the proposed supersonic flight operations in the Reserve Military Operations Area. As you are aware, Congress is in session and my presence in Washington has made it impossible to be in Reserve.

When I was elected to office last November I vowed that I would represent the best interests of my constituents in the Third Congressional District.

I want to thank the Air Force for extending the commentary for the draft EIS and for scheduling this hearing in Reserve this evening.

Ever since the revised DEIS was published and distributed this summer, my office has been bombarded with letters from indignant residents in Catron County posing the question: Why us? I sympathize with their views.

I have personally reviewed the revised DEIS and can truthfully state that I am quite disturbed at portions of the statement.

In summary, it states that,"Recommended noise level guidelines indicated that about six out of almost six hundred and fifty people in the Reserve MOA would be highly annoyed." I don't know where you came up with this statement, but I can assure you that almost all of the other six hundred forty-four people in the Reserve MOA have contacted my office highly annoyed and--

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(Applause rendering speaker's rendition inaudible.)

Last week I visited Reserve while on a Congressional recess. As I was traveling from Socorro to Reserve, I couldn't help but admire the view and the peace of the countryside. I can fully understand and appreciate why residents of Catron County love this area and why they would do almost anything to preserve its beauty for future generations to enjoy and appreciate.

In the Draft EIS it states, "Review of available literature information obtained on species response beside ruins and other areas and special studies conducted for coordination under the Endangered Species Act indicates supersonic flights in the Reserve MOA will not significantly impact domestic animals or wildlife in the area." This statement in no way is inclusive and leaves much room for doubt. 364

There are not too many places in this country that one can roam and observe the wonders of Mother Nature. Now you are asking the residents of this county to trust you with no assurance that the serenity of their backyards will be undisturbed.

As to the section pertaining to the economy of Catron County, the DEIS states that, "The potential for sonic boom impact on the local economy has been evaluated and determined not to be significant." I don't know if any of you or a member of your staff has had the 365

opportunity to fully examine the economy of Catron County, but I can state assuredly that the local economy does not need any other obstacles that could further adversely affect the already needy economic situation that faces the residents of this county. 365

(Applause.)

Anytime a Congressman receives such a large number of letters opposed to a proposal, I can't help but wonder whether all options have been fully examined or not. I say this in view of all the letters my office has received.

Here are just a few excerpts from all of those letters. One person wrote saying: "The sources of income here deals with cattle raising and tourism. The startling sonic booms will have an alarming effect on them." Another constituent wrote saying: "The reason many older people moved to this peaceful natural area is to get away from unhealthy pollutants and noise. Is there no place for them to go? Property values will ultimately be reduced if such adverse

conditions prevail as sonic booms, broken windows and other personal disadvantages." Yet another resident states, "I would not wish sonic booms on any of the people. But when it comes to sacrificing the people of Catron County for the sake of the all mighty dollar or the convenience of the military, I say, 'over my dead body.'"

I am in no way inclined to undermine the efforts of the Air Force. I believe in a strong national defense and support the proper training of those who serve in the various branches of the military. But I can't help but think that all of their options have not been fully explored. Options like finding more time on the White Sands Missile Range airspace. It is clearly stated in the DEIS that, if weekends are used, the 49th Tactical Fighter Wing could conceivably fly up to fifty supersonic sorties per day on weekends increasing the White Sands Missile Range sortie rate from six hundred to seven hundred twenty sorties per month. Then there is the option of using only the White Sands Missile Range and the Valentine MOA for supersonic flying. The population of

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Valentine is two hundred thirteen people versus the population of Reserve alone which is almost or over a thousand four hundred and forty people.

It is my understanding that the 49th TFW is the sole military user of the Valentine airspace and no conflict with other military or commercial users of the airspace exists.

How about the option of creating new airspace? I understand that this option is limited; but it is still an option worth exploring.

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As I stated earlier, I sympathize with the views of the residents of Catron County and only hope that we can somehow arrive at an equitable solution to this controversy.

Thank you. (Applause.)

HEARING OFFICER: Thank you.

HEARING OFFICER: At this time speaking on behalf of James L. Martin who is a member of the New Mexico State House of Representatives, I believe is his father, Mr. Martin.

FRANK MARTIN: I'm Frank Martin from Socorro and I'm the father of Representative James Martin and I'll read this short statement. That's all, I won't be all day.

Representative Martin is sorry that he cannot attend the meeting. But he wishes me to convey this message to the Air Force. He strongly opposes the use of Catron County airspace for F-15 dogfights and believes that there are alternative sites in New Mexico and, especially, Texas. But, if the Air Force is allowed to use Catron County airspace, he would suggest that the Air Force and New Mexico Tech, New Mexico Institute of Mining and Technology, install seismographs and air shock measuring devices. This way a real accurate evaluation of the problem could be done; and if the emissions are as damaging to the health and welfare of Catron County residents and their property and wildlife, as we feel it would be, Catron County would have facts to back up its position.

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He also wants to thank those of you who have written him letters. Thank you, sir. (Applause.)

HEARING OFFICER: Thank you.

HEARING OFFICER: Mister David Vackar, Chairman of the Catron County Commission.

DAVID VACKAR: Thank you, colonel. As stated, my name is David Vackar, Chairman of Catron County Commission. I would like to start by reading the Catron County Commission Resolution Number 017-84, dated October 13, 1983.

WHEREAS, the Catron County Commission convened in special session on October 13, 1983, did propose the following resolution.

WHEREAS, we believe that the low level supersonic flight training will increase air pollution and the sonic booms will greatly increase the noise pollution which will adversely affect the recreation potential in Catron County. The recreation business being one of the major sources of revenue for the people of the county; and

WHEREAS, we believe the quality of the peaceful and rural lifestyle that presently exists in Catron County will be diminished, if the supersonic training takes place; and

WHEREAS, Catron County has numerous historical buildings and archaeological ruins which will suffer structural damage because of the repeated sonic booms and these buildings and sites are of such historic value they could never be replaced even through compensation; and

WHEREAS, we believe that the citizens of Catron County already contribute enough to the nation's defense program with the present

use of the Morenci Training Area and the low level training route through much of the county; and

WHEREAS, we believe that the Air Force's revised Draft Environmental Impact Statement still does not adequately address the impact of the sonic booms on human health, the economy of the county, the effect on the wildlife, and in particular the Peregrine Falcon and the Bald Eagle; the effect on land values and the damage to structures; and

WHEREAS, we believe the Air Force has not seriously considered any of the proposed alternatives of flying over Catron County.

NOW, THEREFORE, be it resolved that the Catron County Commission opposes the low level supersonic training flights in Catron County, New Mexico, for the reasons hereinbefore stated.

Signed by the full Commission of Catron County.

I might state, sir, for the Air Force's benefit, that the people of Catron County and this Commission oppose wholeheartedly your flying supersonically over Catron County and, specifically, the people of Catron County.

And we look forward to looking at all of our alternatives to try to make sure that this is not done; specifically, political and possibly legal recourse to keep you from flying supersonically over Catron County. Thank you. (Applause.)

HEARING OFFICER: Mr. Steven Rothman, also of the Catron County Commission.

STEVEN ROTHMAN: I have--before I start--I have some view graphs I would like people to see. I have copies for the court reporter. My name is Steve Rothman. I'm a consultant for the county and my wife and I also live here, Post Office Box 218, Glenwood.

I don't know if it's possible I think I can speak loud enough.

(Setting up equipment for viewing of slides.)

REPORTER: I can't hear you. If you want on the record, you'll have to speak up.

STEVEN ROTHMAN: Hello. Can you hear me? All right.

(NOTE: See Attachment 1 for exhibits referred to by Mr. Rothman in his presentation.)

STEVEN ROTHMAN: I want to take ten seconds about me personally. My wife and I are residents in Catron County. We live on a farm in Copper Creek. More to the point, I have spent a great deal of time, in fact seven years working for MITRE Corporation, created not for profit, created by an Act of Congress. It does systems engineering and environmental health work for government agencies. It was set up to supply expertise that was not available to the government itself, from the government agencies.

I have worked for the Air Force, the Tactical Air Command, in fact, which is here tonight. I have worked for NASA at the Johnson Space Center, NORAD, which is our joint air defense with Canada, EPA, ERDA, and other things of that sort. I just mention that I have sat across the table from generals in the pentagon who have been there to listen to me. They trusted me to make an objective analysis that they could not get from their own people, and I am doing the same now.

The Air Force has been quite glib in answering your questions. I'm afraid I've lost several days out of my life because I've been so tense in listening to them. Whether they intended to deceive you or just make a good selling job, the fact is the first thing you should ask is: Why are those F-15s at Holloman?

The answer is in this document. You can see it's classified secret. It's no longer secret. It's not classified. This was their statement, their environmental impact statement of locating those F-15s at Holloman. I'm going to point out this last statement here that says: "F-15 and T-38 activity will take place within the restricted airspace controlled by White Sands Missile Range. The airspace overlies unpopulated desert plains and sonic booms generated during the training will not be perceived outside the boundaries of the White Sands Missile range." That's what they said in their own document--incidentally, not quoted in the DEIS--when they flew those F-15s to Holloman.

I thought it was a pretty clear statement when they talk about the airspace clearance. They say-- They are talking about a number of things. At the bottom they say: "No additional airspace is planned to support the transition from F-15...or the increase of T-38 aircraft." So they said, internally to themselves, and when they briefed this document, they were putting those F-15s here to fly over White Sands.

I just want to point out the kind of--I hope these things are coming on the screen--the kind of document that we're looking at. Here's their selection criteria. This comes also from the same document.

Incidentally, I should reference these documents. I've just gone through Exhibit A--A through B. And this is from Reference 15 of the DEIS. I call your attention to, to--notice it's (1) through (6). These are the selection criteria of why they chose Holloman. Number (2), it's a complex statement, but it talks about aviation. It says they want air combat maneuvering--which is dogfighting--airspace with unconstrained use, no altitude limitations, and they say, it is only limited, should be limited use by general aviation.

The reason I'm pointing this out to you, this particular number (2), is because when you go to our DEIS and they quote from this same document, in fact, this is reference 15 of their document, this statement has changed. Here also they're talking about Holloman, a beddown document, here also, you have one through six. I assure you that all of them, one through six, with the exception of two, are the same. But when they quote from their own document, they've seen fit to change number two. Now it reads, "Airspace in the vicinity of Holloman is capable of supporting supersonic flight activity over sparsely populated areas." How many times have you heard "sparsely populated areas"?

That was not in their original document; their original document had to do with airspace, aviation, this suddenly becomes talk about sparsely populated areas.

They've misquoted their own document. Obviously, it was their intent to put in sparsely populated area when that was not at all the reason that they came to Holloman.

Just to give you a--you're not going to see this whole thing. This page, this is from the DEIS itself, it's page 4-16 and you saw it up on the screen before. This is from the Reserve DEIS. I call particular attention to Reserve with the number 440 over it. This is supposed to be the number of people in the Reserve MOA. As you go northeast from Reserve, you'll see a 20, a 3, a little kind of an odd spot there, and a 75.

I'm going to show you what they told the people of Valentine in the DEIS in Valentine. Notice we're looking also at 4-16. It's the same document reference, but now something has changed. This is what the people in Valentine saw about you. There's 3500 people in Reserve. If you go northeast from Reserve, you'll find there are 110 people, 150 people and 130 people. Remember over on the 130, I said that there was a little erasure. There it is and it's offset from each other. They erased that 130. In fact they erased the 3500 and put 440. These documents were made up at the same time. Of course, there's no possible reason why these 110 people disappeared, or 130 people disappeared, or that they changed them to 75.

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But I'm just trying to show you, they're playing games with you. I can't tell how you feel, the Air Force has answered your questions in a gentlemanly friendly manner. They are gentlemen; however, they're giving you--there's a point where a sales job becomes a con job. Besides which, the EPA and the law requires them to tell you the truth. They're supposed to tell you what the impact is. After all, the EPA, it is up to them what to do, after they tell you what the impact is.

This is a bit of history. This is the previous EIS that we threw out in 1979. Notice though, they told you about these little areas in here, that they're going to do all the maneuvering. Before, before they worked some mathematical therapy on some of the documents, they're saying then, you know what, this is the area of impact, fourteen miles all the way around the boundary, including Glenwood, Mogollon, Luna, Alpine, and lists some other places. And as you see, the comparison between the documents is--

I want to give you just a little peek at it, just a couple of points through here. I have detailed comments which I am going to put in writing for the county. This is, ah-- You're going to hear--quote--or you heard--quote--about what happens here, how many highly annoyed people there are going to be.

This all comes out of the SST tests of the supersonic transports over Oklahoma City. I just want to show you FFA information. We have test house number four. Their looking at interior defects here, nails popping out of walls, peeling and cracking and things like that. The total--I can't see this on the chart at the same time--but I would say that they've had 130--excuse me--115 new cracks. This is over a six month period in Oklahoma City. They found there were some things happening after it also, and in this one house, they found 509 defects. The Air Force didn't see fit to put that in the DEIS. I should say, that in answer to some questions, there were 15,452 phone calls to the Air Force during that test of which 9,732 were for damages, 4,901 people actually filed a claim. Now the Air Force has actually paid, out of the 4,901 people, the Air Force paid 289 of them, the Air Force claims.

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TIMEKEEPER: You have one minute left.

STEVEN ROTHMAN: The one thing that they also didn't include in their DEIS. I'm on now Exhibit J. This is from their own reference, 99, Galloway, a responsible expert in Air Force employ. However, they didn't see fit to reference actual portions of this document which I choose to do. "Of equal uncertainty is the applicability of noise response information inferred from a suburban-urban population--"

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371 remember that's the Oklahoma City thing. That's where these highly annoyed people come from. 371

TIMEKEEPER: Times up.

HEARING OFFICER: Excuse me, sir, you will have to bring yours to a close.

STEVEN ROTHMAN: I will, I'm getting there.

HEARING OFFICER: All right.

STEVEN ROTHMAN: Four hours from now I could probably finish at a certain time period.

(Laughter, applause.)

HEARING OFFICER: I'm sorry, sir--

STEVEN ROTHMAN: However, I intend to finish in a minute or two, if you'll bear with me.

HEARING OFFICER: I'm sorry, sir, just a second. I'm going to give you about one more minute because--

VOICE: (Yelling) Colonel, he's representing us.

VOICES: (Multiple comments by audience inaudible.)

STEVEN ROTHMAN: I've been working with the county and I think this is information important to the Air Force to cover holes in their documents as well as to the people here. And I would like to--

(Inaudible due to applause and hollering from audience.)

HEARING OFFICER: Sir, just a minute. Let me make it clear. While I want to be able to hear from everybody, it is entirely within my prerogative as to how long each speaker is to speak. As a matter of fact, it's within my prerogative as to how long the hearing will last.

VOICE: This is a farce.

(Multiple comments by audience inaudible.)

HEARING OFFICER: If it gets disorderly, and it will not follow an orderly procedure, then I will call the hearing to a halt.

(Applause.)

STEVEN ROTHMAN: I'm certainly not being unorderly. I'm asking for a few more minutes.

HEARING OFFICER: I cannot grant a few more minutes to everyone who might desire it and I'm not going to, to be fair to the many others who also desire to speak.

VOICE: He can have my five minutes.

VOICE. He can have my five minutes.

(Multiple comments by audience inaudible.)

HEARING OFFICER: There is no pooling of time. Now I will allow him to proceed, but not necessarily as long as you may personally desire.

STEVEN ROTHMAN: All right, don't worry, I'm not going that far.

STEVEN ROTHMAN: I was starting to point out to you here this is the Air Force's own expert saying that the Oklahoma City test was done in a city, of course, and does not apply to the very low population density, to the rural areas. This also wasn't quoted in their DEIS, from their own expert.

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You've heard talk about the economic impact here. The Air Force prepared a 277 page economic impact statement which they reference in their EIS. In that they--as it said right here, this study, in their economic impact study, Valentine and Reserve MOAs is summarized in five paragraphs. Most significant is their finding, the Gladden MOA, near Phoenix, Arizona, that sonic booms appear to have in no way deterred a strong trend toward retirement home development, et cetera.

So I looked at that, as I have been checking all their references, and this is the kind of thing that the reference says. They are comparing the counties. For instance, let's look at Gladden. The county of Gladden, they say, that the population has increased, employment has increased, personal income has increased, retail sales has increased, and they go on from there. But what are they really talking about? I looked at Gladden, all right. Persons in Gladden--they talk about Gladden. These towns are sparsely populated. Gladden itself has the population of ten people, all right. Now, remember though, I said

they were looking at the county statistics. Gladden happens to be in the same county--it's Maricopa County, I believe I'm pronouncing it correctly--as Phoenix. So when they are judging how the population is increasing and the retail trade is increasing and people's assessed valuation is increasing, they happen to be using 55 percent of the state's population. They are judging the effects of sonic booms on a sparsely populated area of ten people, or a couple of hundred people, by looking at the statistics of one million three hundred and ninety-three thousand people.

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I'm telling you it's a game. This document has no scientific credibility. I don't want to get angry about it, but I'm just trying to tell you, you're being conned.

We were able to show the defective DEIS before, the fact that they've increased the weight of it, does not make it any better. In fact, this document that I'm quoting right here is 277 pages that you don't even have. Just a one line reference in the document in order to allow them to say there is no economic impact on you. It is meaningless. That's all I have to say. A sales talk becomes a con game at some point and we've got one from the Air Force.

(Applause, whistling, yelling.)

HEARING OFFICER: Mr. John Kelly, also with the County Commission.

JOHN KELLY: Thank you, colonel. My name is John Kelly, my address is 2001 Broadway Southeast, Albuquerque, 87102.

As he stated I am the attorney for the Catron County Commission. I have represented the county in connection with this matter since 1979. I think this is certainly not the first time we have had occasion to discuss this issue and I'm sure it's not going to be the last, so I'll try to keep my remarks as brief as possible.

This EIS, as I think you indicated earlier, was prepared pursuant to requirements of the National Evironmental Policy. That law is clearly the most significant environmental legislation that has been passed in this country in the last fifty years. The primary requirement to that statute is the preparation of the environmental impact statements when federal actions, major federal actions affect the environment. The regulations of the council on environmental quality are the official federal regulations which implement the National Evironmental Policy Act. If I may just paraphrase a provision of the regulations.

They say that NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality, accurate scientific analysis, expert agency comments

and public scrutiny are essential to implement NEPA. Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail. Ultimately, of course, it is not better documents, but better decisions that count.

I'm speaking for the Commission when I say that, since 1979, the past County Commission and the present County Commission have waited anxiously for this new revised environmental impact statement. We really sincerely hoped to have the kind of high quality scientific analysis and objective discussion of environmental issues that this project poses in this Revised Environmental Impact Statement.

For reasons that Mr. Rothman was only briefly able to touch upon, we haven't received such a document. Had we, I think the commissiorers would--I think the commissioners, generally, would have approached this issue with a spirit of compromise and tried to find some way to accommodate the interests of the Air Force and Catron County. But this environmental impact statement is not going to move us in that direction.

I have been litigating EIS cases for ten years in New Mexico, California, and the Federal Courts in the District of Columbia. I think I have spent as much time in litigating and reading these statements as

any lawyer in New Mexico and this environmental impact statement just does not pass muster. There are a number of inadequacies and I would like to just touch upon a couple of them.

A most important one, I think, is the--has to do with the project that is being discussed in this EIS. The project is not the proposal that Major Graham discussed, to fly 300 sorties a month. The project, or the action that is going to take place, is to designate this area as a supersonic operations area. What happens within that supersonic operations area, after it has been designated, is an unanswered question. Major Graham has presented one hypothesis and, concededly, a quite reasonable hypothesis that three hundred or so flights will be flown. But there is nothing in the EIS, and I doubt the Air Force is going to get up tonight and give us any assurances, that there will be only three hundred flights. They can't give us that assurance and once this decision is made, there could be ten flights, there could be three hundred, there could be fifteen hundred. The people of Catron County have no guarantee that the impacts of this action would be limited to three hundred flights.

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Federal law requires that you analyze the potential environmental impacts of the action and the

potential involves the worse case analysis of far, far more flights than is being discussed in this EIS. This ellipse, this mythical ellipse, there is no assurance that that ellipse--that the flights will be confined to that ellipse. If the Air Force could give us that assurance, then that ellipse would be the extent of the supersonic operations area.

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So an environmental analysis that limits the supersonic noise analysis to that ellipse is just--it just doesn't reflect what could potentially happen in this area. It's quite possible that these flights would be directly over the City of Reserve and an environmental analysis must be conducted that considers that possibility--it hasn't been done yet.

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The alternatives section of the environmental impact statement has been cited by many Federal Courts as the most significant part of the EIS. The CEQ regulations at Section 1502.14 say that this section is the heart of the environmental impact statement; that the information contained in the alternatives section should present the environmental impacts of the proposal and the alternatives, in comparative form, thus, sharpening and defining the issues and providing a clear basis for choice among options by the decision maker of the public.

We have a great many concerns and disagreements with the analysis of alternatives in the EIS. I won't go into them in any detail now because they are going to be covered fairly adequately in our written comments. I will say that the gentleman earlier, who asked questions about T-38 flights and the possibility of flying supersonic flights in the Beak and Talon MOAs, is hitting upon an alternative that should have been thoroughly discussed and was not. If you can fly supersonic in a twelve by eighteen area, you can fly supersonic in three other MOAs far closer to White Sands than the Reserve MOA. The EIS also does not discuss the possibility of temporarily relocating the T-38s to Cannon Air Force Base or to another air force base to conduct their flights; thereby, freeing up their time at White Sands for supersonic flights. 375 375

Finally, and I thought the Department of Defense was famous for cost benefit analysis, there isn't any cost benefit analysis in this DEIS to quantitatively demonstrate the billions of dollars that are going to be lost to the Air Force by flying these planes a hundred and fifty miles away. There is a figure in the DEIS which indicates 2500 dollar an hour costs for these flights. Taking that figure, and looking at the number of hours of flight time that it takes just to get to Reserve, it would seem that the cost to the Air Force is going to be 376 376

millions and millions of dollars to fly in Reserve rather than somewhere else. That kind of an analysis is a standard part of an environmental impact statement. It's not here. It causes one to suspect that it was not included because it would point too dramatically to the benefits that would accrue to the Air Force from flying these flights closer to home.

In summary, there is a scientific analysis, it's flawed, it's incomplete. A lot of the analysis in the EIS is misleading. We feel that, after four years, we should have gotten an excellent document. We haven't received that. I would suggest that we do another revised DEIS, but there is really no reason to expect, at this point, that it would be better than the previous ones.

TIMEKEEPER: One minute.

JOHN KELLY: I understand I have one minute. Let me just make one other point. There are some people here tonight from Nevada and those individuals are concerned about the Navy flying supersonic in Western Nevada. We learned recently that Hill Air Force Base in Utah is also proposing to fly supersonic in a presently subsonic MOA in Eastern Utah. We know that there is a Draft EIS on the Sells, Arizona area which proposes to fly supersonic over the Papago Reservation. Indeed,

those flights have already been done. The National Environmental Policy Act requires that, when there are similar actions that have similar potential environmental impacts, that a programmatic or a generic environmental impact statement should be prepared on the effects that are common to these various actions.

It would appear here that we have an emerging program within the Department of Defense to fly supersonic over populated areas and we submit that that issue should first be analyzed in the programmatic environmental impact statement before proceeding to cite specific analysis of supersonic flights in a MOA such as Reserve. Thank you very much, sir.

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HEARING OFFICER: Thank you.

HEARING OFFICER: Next, Mr. Glenn Griffin who is representing the Reserve School District.

GLENN GRIFFIN: My name is Glenn Griffin, Route 10, Reserve, New Mexico. I am Vice President of our local School Board, and I would like to present this letter to you.

> The School Board of Catron County, School District Number One in Reserve, strongly opposes the plan of supersonic flights in the Reserve MOA.

The Board feels that the Air Force has not seriously considered the alternatives to the proposal. The potential health effects are certainly clear enough to warrant further detailed research before the flights begin. The effects on the tranquility of the county are obvious.

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The impact on the school, according to the DEIS, would be substandard. The interference with classroom atmosphere would be detrimental to the students.

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The Board believes that the Air Force, with more efficient use of existing supersonic airspace, could accomplish the necessary training needed to maintain combat readiness.

Thank you.

(Applause.)

HEARING OFFICER: Thank you, sir.

HEARING OFFICER: Mr. Lowell Sumner. I have an understanding that you're a research pathologist.

MR. LOWELL SUMNER: Judge Ratcliff. I am here to speak to you about the effects of sonic booms on human health; that is, the Air Force claims and the reality.

The Air Force admits that, in its dogfighting of supersonic aircraft, that they would create thirty to forty sonic booms per day, some of which would crack plaster and break windows; but they claim that such shocks are, "not known to cause any health hazards to individuals living beneath the area."

And they estimate, as we've already heard tonight, that only two or three booms per day would be heard by any one individual in the entire Reserve MOA; and, at worst, they say, only six people would be highly annoyed.

Calculations by opponents indicate that three or four times as many booms would be heard by any one individual and many more individuals would be involved.

In addition, a serious health hazard would result from the prolonged bombardment. Our original paragraph-by-paragraph analysis of these Air Force claims totals over twenty pages. And, of course, the presentation tonight has been greatly condensed for the few minutes allotted. But the complete review will be presented to the Air Force and to our senators, our congressmen, and governor before the November 4th deadline.

A sales prospectus presents its point of view in the best possible light. Hazards or drawbacks are downplayed or not mentioned at all. The new Air Force Environmental Impact Statement, attempting to show virtually no harmful effects from sonic booms, follows this pattern.

In Appendix E it buries an adverse health forecast by a University of Texas authority, under a load of largely irrelevant Air Force comments.

Results of world-wide research on stress have been summarized in two books, which I have here, for the general public--pardon me--by Dr. Hans Selye. These books aren't hard to find in libraries. This one was obtained from a news stand. It's the most recent summary. This is the old classic which has been around for years. There's a copy in the Silver City Library. This work was pioneered by Dr. Selye, who is an international authority, starting in the thirties and it continues in full swing today.

Selye defines stress as, "the grate of wear and tear on the body." Modern medicine attaches great significance to research findings concerning stress on human beings. Fifty years of stress research show that a typical stress reaction is produced by the startle effect of loud noise, such as sonic booms, which are roughly equivalent to the explosion, without warning, of a stick of dynamite in your backyard.

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Whenever a person or an animal is startled, an age old uncontrollable reflex takes place within the body, preparing it for fight or flight. The body is immediately flooded with adrenalin and other potent internal secretions, the hormones, to give it extra energy and endurance for the emergency. Because this kind of stress reaction is completely automatic, like the blink of an eye, when threatened, one can never get used to sonic booms.

If continued over a long period, exhaustion of the powers of stress resistance follows. The body then loses control of the prolonged flooding by hormones and they proceed to over-stimulate and attack vital organs. Blood pressure stays high, heart rythmn changes. Development of stomach ulcers is one of the commonest early signs of such long continued stress.

TIMEKEEPER: One minute.

LOWELL SUMNER: Sleeplessness is another. Hypertensive kidney disease, tooth decay, tuberculosis, arthritis, lowered resistance to infection, numerous irreversible degenerative diseases, and premature aging, are some of the consequences that eventually follow.

TIMEKEEPER: One minute.

LOWELL SUMNER: Because of the lower resistance, some forms of cancer have been implicated.

Not mentioned by the Air Force is the discovery, that each of us appears to be born with an inherited and

unchangeable total reserve of stress resistance. Each exposure to stress, despite the recovery brought by rest, leaves a small chemical scar, as Dr. Selye calls it, or insoluble residue in the cell structure, and uses up a portion of our total life reserves of stress resistance.

Dr. Selye points out that, "aging is not determined by the time elapsed since birth, but by the total amount of wear and tear to which the body has been exposed." For this reason, elderly people would be the most vulnerable to a daily bombardment of sonic booms.

By contrast, the Air Force summarizes its approach to this hazard when it states that "house rattles appear to be the most sensitive effect of sonic booms." Another quote: "There is no evidence known to us of direct physiological injury due to exposure to sonic booms." And another quote: "Until such proof is forthcoming, such possible effects must be ignored in the planning or decision making process." Continuing the quote: "If we do not ignore these conjectures, the question is: Should we have an industrial civilization at all? A few sonic booms would be only a small contribution to the average person's total noise experience."

So much has been learned about the--

TIMEKEEPER: Your time is up, sir.

LOWELL SUMNER: --of long continued stress that the present environmental impact statement, the DEIS,

must be judged inadequate to comply with the act of Congress when it ignores the subject or tries to dispose of it by estimating that only six people in the entire county will be, at worst, highly annoyed.

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Clearly, to correct and revise the current Air Force DEIS, with respect to the effects on human health of prolonged stress from sonic booms, full account must be taken of current knowledge resulting from fifty years of medical research. To qualify, the present document would have to be rewritten to present all the known facts. The truth, the whole truth, and nothing but the truth. This is what Congress intended.

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(Applause.)

HEARING OFFICER; I am now going to turn to the list of the forms that have been circulated earlier that you have filled out. I might indicate also that Lieutenant Colonel Tate, who is at the rear of the auditorium, is with the Public Affairs Office. And particularly for the benefit of those who are perhaps with the press, or others who may wish to speak to someone who, in effect, will be the spokesman for the Air Force for matters at the conclusion of the proceedings, or for now, for that matter, if you desire to talk with him. He is the individual that you should address.

Again, at this particular point, it's going to be assumed that you are speaking for yourself unless you indicate otherwise. This will be the basic way the individual who is keeping the time will know.

I'm sure some of you have indicated you are speaking on behalf of an organization.

I am not going by any particular order, simply the manner in which they have been given to me.

The first individual that I have on the list-- And again, of course, it's five minutes, if you're speaking on behalf of yourself. If you are in fact representing a group, it will be ten minutes.

HEARING OFFICER: Jamaica Russo. Alright, we may need a chair to assist you in being able to reach that microphone. Would somebody assist her. And, if you would, give us your name and your address, please, and go ahead and tell us exactly what you have on your mind.

JAMAICA RUSSO: My name is Jamaica Russo and my address is P.O. Box 6, Luna, New Mexico, Dogie Ranch, and my Zip Code is 87824.

We were in a barn at our house and we were in with the goats that we have and a big jet flew low over our barn, and then when we went outside and when we looked at each other's ears, they were red. (Applause.)

HEARING OFFICER: Alright, thank you very much. The next individual, Rhodes Arnold.

RHODES ARNOLD: I am Rhodes Arnold, Lieutenant Colonel, Air Force, retired. I have heard a lot about how far the sonic booms will carry and I have some facts, I think, to refute some of the statements.

I lived in Tucson for twenty-one years. During the last ten years of that period, we were subjected to many sonic booms. The information officer at Davis-Monthan assured the press that there were no Davis-Monthan aircraft creating these booms. Eventually, an individual from the Weather Bureau did a study and found that the sonic booms were emanating from the Gila Bend Gunnery Range and were carrying from eighty to one hundred twenty miles due

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to the atmospheric conditions. Now that's a fact. Steve just handed me this. I'm glad he finally ran it down.

But don't believe these people until you see the facts. I was with the Air Force and the Army many, many years. I know how it operates. A lot of people are damned good people, but you got to question everything they say, and that's my advice to all of you. Thank you. (APPLAUSE)

HEARING OFFICER: Gene McCann.

GENE McCANN: Thank you, colonel. My name is Gene McCann. I am not of this area. I live at 101 Dempsey Lane, Dixie Valley, Fallon, Nevada 89406.

HEARING OFFICER: Are you speaking on behalf of the Dixie Free Militia, sir?

GENE McCANN: No, sir, I am giving my own personal comments.

HEARING OFFICER: Alright.

GENE McCANN: I, too, was in the Air Force during World War II. I served a hitch as a member of a B-24 crew. I have helped deliver many bombs. I have been under attack from flak, fighters, but also I've experienced the horror of an aerial attack by bombs on my area on the ground. And I will say this, if you're not in a bomb shelter, you wish you were.

I relate a sonic boom very much to the bomb blasts that I have experienced, and it's a very unnerving

experience. I will not go into an attempt to tell of the effects of the sonic booms on the human body. This was very clearly done, very well done by Mr. Sumner, I believe. And, I can only say this, God help you, if you--if the people here are subjected to any high number of sonic blasts that, in any given period of time, whether it be a half hour or a day, that's going to knock you out of your socks.

I might also-- I find it necessary, sir, to remind people in the Air Force and all other military personnel, I signed and took an oath to uphold the Constitution of the United States, as did you, and I find that-- I believe that it should be reminded to you that you are a servant of the people. Thank you very much, sir. (Applause.)

HEARING OFFICER: Thank you, sir. E. H. Robbins.

E. H. ROBBINS: If you will bear with me just a minute, we have a few visual aids here.

HEARING OFFICER: Is that something, by any means, that you have a copy of? That would be something that would eventually be attached to the record so that it is preserved for those who happen to see it.

E. H. ROBBINS: No, sir, this map has been around the State of Nevada, flown from one place to another, and we've used it mainly for the Navy. But we feel that this is the Department of Defense, and if you'll bear with us here, we'll show it to your group out front. But you probably won't be able to see it.

HEARING OFFICER: That's all right. You are representing the Dixie Free Milita, are you not, sir?

E. H. ROBBINS: Yes, sir. This is a sectional map.

HEARING OFFICER: All right. You may need to get close to the microphone or at least speak up to where everybody can hear you. Maybe you can have somebody else hold it while you do the speaking, if that would assist you.

E. H. ROBBINS: This, I'm sure the Air Force is aware of, is a sectional map of Nevada. You've probably seen more like it. We'll flip over this first one, Gene.

What you see here are basically MOAs. We've been talking about them all evening; military operations areas. The one at Gene's side, here, the top righthand corner, is a MOA. The one that we're interested in, where his thumb is now, is Gandy. It's right where your thumb is, Gene. That's the one the Air Force proposes now to come into the State of Nevada for a supersonic operations area. According to the FAA, there is no such thing as a supersonic operations area. They have not done enough environmental studies to call it such a name.

We are not-- In Dixie Valley, we are not anti-American, we are not anti-military. We absolutely know that without training, a pilot wouldn't last long enough in the sky to worry about it. We realize this. What we are saying by this, we would like the Department of Defense,

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384 meaning the Navy, the Air Force, the Air National Guard, and any other air people that wish to use an area, to condense it, to use that area and to remove the people from it. 384 We do not believe the Department of Defense has gone into this in any way, shape or form.

In our area, in the center of the map of Nevada, you will see three red zones. Those are restricted areas around a NAS boundary, a naval air station. The lines coming from that, those three, are the proposed supersonic operations area. They are proposing fifty-seven hundred square miles because--the samething that the Air Force says--it's sparsely populated. They have made a comment that it's a never-never land, and there are only twelve hundred people living there. Fifty-seven hundred square miles will be subjected to between twenty and one hundred sonic booms per day at different altitudes and different aircraft with different overlaying overpressures and intensities. They have generated pressures that put, in our schoolhouse, a twenty-nine inch crack that you could put two four bit pieces in. This was generated by an F-14 in straight and level flight at just under five thousand feet, at Mach 1.5.

385 The only trouble with the Air Force, that I believe the Navy has not taken into consideration, is that when an aircraft is maneuvering-- We won't go into the technical aspects of sonic booms, but we've had to study a lot of it 385

in the N-waye and all the rest of it here, that it generates. It is called a superboomer or a focused energy. When this happens, you won't get one pound or two pounds or three pounds of overpressure. It all depends on the configuration of the aircraft and the mode of what it's doing, its weight, and a multitude of other things. This is things that we are going through. The bottom of the--what you see on the map now is the Nellis Gunnery Range and an Atomic Energy Range. They wish to increase this so that the Air Force could use this. This is part of an Air Force base also. Would you just flip over to the next one, Gene.

This now shows you what the Air Force, at the bottom, wishes to do with Nellis. They wish to take in this much more of Nevada. The Air Force wishes to take in all of White Pine County, and then the Navy wishes to take in all of the central part of Nevada. You are probably wondering what these black lines are. Those are training routes. There are only one-third of them that we put in. We did not put in the other parts because you wouldn't be able to see the State of Nevada. They are approximately five to ten miles wide. A civilian pilot could encounter an aircraft at any level in there, at AGL, ground, above-ground level, at zero, or whatever they wish to fly in their training routes. And you could encounter them at supersonic speeds. They say they do not fly that supersonically.

Of course, the AOPA has enough records to dispute this.

We don't come here to agitate the Air Force, although they are now, in the vernacular of today, they're in our turf now, so we're going to look into their proposal. In our valley alone--which is in the center part of this part right here, over a hundred and ten miles long, eleven miles wide--we have a bombing range at the southend, an EW, electronic warfare range, in which they train their Navy air pilots, and it is exactly the samething as what the Russians use for their tactical command. We are aware of what they need. We have stated over and over again, if they wish to fly in it, fine, get us out. They have inadvertantly dropped a live two thousand pound bomb last year. They still haven't recovered it because they can't find it. This year they dropped a thousand pound practice bomb. They did find it. They didn't hit any towns, but that's-- They phoned us up one night and said they lost a midair refueling tube.

I've worked on jet aircraft, mainly the F-111. I worked on their ordnance systems. I know what it takes. Inadvertantly, they can, not only drop their whole ordnance, but, they can drop the pylons, the stations that they're on, they can have runaway guns. We've done a lot of testing on this. I've worked on them eleven years. I know what can happen.

What we're here to say is: We hope and we would desperately plead with the military that, if you wish an area to practice in for the defense of your country, there is no sense in doing it, if you're destroying the people you're supposed to defend. We keep an accurate log of what happens in our valley. Over a one year period, we have had one hundred and five sonic booms causing damage to people and to structures.

We have a little map here that we will show. If you will look at those black little boxes in there. Those are MOAs, military operating areas. The Air Force says they need some MOAs. Good Lord, there isn't very much left of the Western United States. They have enough now. I think what it is really going to take is that the military services stop the sibling rivalry and sit down and act like intelligent individuals, set up areas where they wish to do it, remove the people from them, and then go out and tear hell out of it, and if they wish to tow a plow behind them, well, do it. But, the basic premise of this whole thing is, we, the people--you are our servants, as Gene mentioned, you are supposed to protect and defend us. We wish that you would do it in the best possible manner and we would help you in any way we can as long as you don't try to destroy us. This is the only reason we're down here in New Mexico, is to show what has happened in our valley. And, if at all possible, if the Air Force will let us help them, they will also be helping the people of the United States. Thank you. (Applause.)

HEARING OFFICER: Mary Croft Russell.

MARY CROFT RUSSELL: I have a statement in the form of a poem. My name is Mary Croft Russell, my address is Box 6, Luna, New Mexico.

It's quiet here in the high country.
Listen to the birds and the wind in the pines.
If you don't like the noise pollution,
Come into the mountains where you can unwind.
Could it be thunder I'm hearing?
But there are no clouds in the sky.
I see a jet trail; now two or three.
They produce sonic booms as they fly.
I'm riding a green colt around.
He's doing quite well, considering.
I know he'll bolt at a loud sound.
And straight to the barn he'll be galloping.
A primitive area, peaceful, good streams, are untouched.
But low flying Air Force down-canyon,
Means no one will catch very much.
Here come the jet fighters again,
Pretending they're strafing this farm.
It's part of their education.
They're learning to do people harm.

I'm not certain that what ya'll are telling us is exactly accurate because in the year and a half I've been living

in the northern end of this county, fighter jets have come over our house as much as three times a week, at less than a thousand feet altitude, within a mile, which is contrary to the FAA, which states that you don't do that close to people's houses.

I've been in contact with the Air Force in Washington. I complained to them last summer. It ceased for a couple of months and within the last few weeks, it has started up again. And it seems, so far, that we've been lucky not to have been walked on by our horses, stomped by our horses, and physically harmed enough to where I could go to a doctor and say: Well, a jet came over us and caused this injury. I've got the sonic boom claim form and I'm ready to do that, but I haven't been able to yet.

However, at the same time, when it comes time to milk my goats, which I do twice a day, the production is always considerably less after these jets go over us, or after a loud sonic boom happens. They haven't been terribly loud yet, but I guess they're going to be. And I can't really put my finger on what it means to me to have this goat milk coming in because I live way out in the middle of nowhere. My nearest neighbor is eight miles by horseback, fourteen miles by road. And I can't run to the store when I run out of milk. And I've got kids, I've got other animals, and everybody depends on this. It's a major portion of what we do. The reason I moved here is because I like a

peaceful, orderly, quiet lifestyle. I can't get it in Nicaragua, can't get it in Southeast Asia. I was born here at Bergstrom Air Force Base. My father was a fighter pilot. I'm not sure if maybe this was his legacy to me--he was killed in Korea, by the way--that I have to be a target. I'm aware of the electronic target-seeking equipment in the modern jets, and I know if they fly over me, they're looking at me and pointing their little imaginary guns at me. I can feel this when they go over. Now, is that stress? That tears me up. I don't think that I should feel like a target from the people that I was raised to believe are doing me a service, the armed service, protection, defense. And there have got to be other ways to practice. Thank you. (APPLAUSE)

HEARING OFFICER: Tonya Lorentzen. Is Tonya here?

VOICE: She's in the back.

HEARING OFFICER: There is an Owen Lorentzen.

VOICE FROM THE HALLWAY: They left.

HEARING OFFICER: They both left? Alonza Smith.

ALONZA SMITH: My name is Alonza Smith. I live off of Apache Creek Route. I'm in the Post Office of Reserve. I have a letter here from the Director and Founder of the Apache Creek Deaf Ranch.

HEARING OFFICER: Alright, so you're speaking on behalf--

ALONZA SMITH: I'm speaking on behalf of an organization.

HEARING OFFICER: Thank you.

ALONZA SMITH: And this founder and director of this branch is one person of the Temple Baptist Church of El Paso, Texas. The Apache Creek Deaf Ranch is a ministry of that particular church. This is his letter:

October 17th, 1983.

Re: Sonic Booms

To Whom It May Concern.

I am Pastor Dean Lang, Founder and Director of Apache Creek Deaf Ranch. I would like to be in the meeting, but I have to be in Indiana for medical treatment. However, I am very concerned and feel you need this information in making your decision of flying large numbers of supersonic planes each day over Catron County.

Apache Creek Deaf and Mute Ranch brings young people from approximately twelve states each summer. We will run between one thousand to two thousand children each summer. We are also now having more fall, winter, and spring retreats. I cannot believe that the United States Air Force would even consider flying these dangerous missions over this territory. Our boys and girls spend a great deal of time each day horseback riding. This becomes especially dangerous for the deaf boys and girls when the sonic booms spook the horses they are riding and they are not aware of what is happening. These boys and girls are between the ages of seven to nineteen. They also take

hikes in our valleys and these booms loosen rocks which could fall on them and kill them. We certainly don't feel the government wants to take on this responsibility.

I realize these flights and training are important, but surely they could be done over water and desert land where there are not so many people involved. I protest these flights with the strongest of urgings.

Thank you so very much for your cooperation.

Sincerely,

Pastor Dean Lang, Founder and Director of the Apache Creek Deaf Ranch

If I may add, approximately one-third of these children are profoundly deaf, that is, stone-deaf from birth, and some of them are retarded. It is very, very difficult in sign language to communicate with these children and to explain what is happening to them in their environment. Most of them do ride horses, but a lot of them ride lead burros; they don't ride the burros, but they lead them in the various activities that they have at the camp, like their particular horse shows, and so forth.

Remember, I'm talking about a thousand to two thousand children.

I have a little note of their population since I have read your revised draft. I don't quite understand your population figures since a friend of mine and I who live in Cruzville, and according to this draft, there are zero number of persons in Cruzville. We personally listed

seventy-nine. Again, going through all the populated areas, I, with other people, have found that we have not only one thousand to two thousand children at the Deaf School Ranch, but also we have a pretty good total count. My total of everybody of Apache Creek, for example--that you listed twenty people living at Apache Creek--came to sixty-seven times more than twenty people. Then, when I found out that they had as many as two thousand children at the Ranch during the summer, and probably more towards the fall and springtime, too, that would make almost a hundred times as many people of Apache Creek as you've given us credit for in the DEIS revised edition.

368 The people of Aragon have been listed as seventy-five people. You, I know, had to depend on the 1980 census. But that was in 1980, and now it's 1983, going on 1984, and populations do change. In Aragon there are now a hundred and seventy-nine, not seventy-five. In Horsesprings, there are not twenty; there are at least fifty. In Cruzville, not zero, but seventy-nine. In Reserve, I don't know how you even got the figure of four hundred and forty people there, because there are already, as the school office gave me their enrollment the other day, three hundred and seventy-nine children in the school. So how could the population of Reserve be just four hundred and forty? As I said, I don't understand where you get some of the figures and facts, but I'm hoping that they will be corrected. Thank you. (Applause.) 385

HEARING OFFICER: As a matter of fact, let me just make a comment here with regard to the statement that was just made. I think that it's that kind of a statement that is basically what I was indicating, initially, is the kind of information that is being sought for. However, your feelings as to whether you feel, ah ha, I've caught the Air Force with something, or whatever your feelings might be in regard to it, that is the purpose of the hearing, that you people living here, plus having examined the document, are in a position to say: Why was this information put there? Or was this considered? Or population figures are no longer what they may have been, at least from the sources that you have the information from. And that's exactly the nature of these proceedings, is to have you surface this. As I mentioned earlier, it's not intended as an argumentative session. It's intended as a fact finding one, giving you the opportunity to surface just the type of information that was just raised.

So I just mention this because I thought it was a good example of what is being looked for. And, of course, that information can be checked to verify that, yes, it is as was recited in the last statement; or no, that it's not; but, it raises it as an issue to be considered.

HEARING OFFICER: Ben H. Thompson. I don't see Mr. Thompson. Lowell Sumner, I have his sheet that

has just come up, but I believe he has already spoken. Lori Faust.

VOICE: She has gone.

HEARING OFFICER: She has already gone.

Dan Campbell.

DAN CAMPBELL: It is with some restraint that I'll be heard. I'll be courteous and polite. I appreciate that the proceedings have been very orderly. I think, Mr. Ratcliff--or, Judge Ratcliff, that was your hope. I think that very little has been accomplished; perhaps, as a result of the way this session has been run. I appreciated that you congratulated a gal here in our community that was able to find out some very simple basic figures like how many people live in the overflight area. Presumably the DEIS, the very basic presumption of it is the impact on people, and that you can't even come up with an accurate number. I'm really not aiming that at you. I think the gentlemen that we haven't been hearing from tonight are the ones that are probably morally culpable; the ones who should take the rap, or have the blame for coming up with two inordinately shoddy documents. This is our period for opinions, and I'm expressing mine. And then come to us and give us, I guess, if you took the few cumulative times that they spoke to us tonight, probably about fifteen minutes of answering questions; one of which they weren't able to answer, was a very simple question from a young lady who simply asked: How much louder are

sonic booms at eight thousand feet than at thirty-four thousand feet? You disallowed her that answer. And I'm sure that you're done with it and she's home in bed tonight. I'd like to know if one of you gentlemen wouldn't describe to us the answer to that question, as it was a question that pertained to technical grounds. Apparently, it was what these gentlemen, who were here this evening, were to answer. It was not her opinion. You brushed it off by saying that it was an environmental question. Can somebody tell us how much louder we can expect booms to be at eight thousand feet--which is why we are here tonight at Reserve--than at thirty-four thousand feet that we've been hearing thus far. Most of us in this room have heard many booms; in fact, many in the last few days at thirty-four thousand feet. Would you allow one of these gentlemen to answer that question?

HEARING OFFICER: I'm not going to go into any answers to the questions for the time being.

DAN CAMPBELL: Thank you. I am speaking for an organization. I would like to take a couple of minutes to give a couple of comments of my own.

HEARING OFFICER: Go ahead.

DAN CAMPBELL: Should we allow the Air Force to do so, this would constitute the first invasion of a training program involving sonic booms of the airspace over national forests. By contrast, the national parks are out of bounds for supersonic flight training. Doesn't the Gila and the, now newly named, Aldo Leopold Wilderness Area

390 deserve the same kind of protection? As you will remember, 390 the Gila Wilderness was the first wilderness area created in the United States by a man named Aldo Leopold. Although I won't presume to speak for him, I would like to speak for those of us who are mostly concerned about wildlife values. Although most of us are concerned, needless to say, about our own homes and our own mental health, we do have, in the Gila and in the Aldo Leopold Wilderness, the Blue Range, and many of the areas that are very close to Reserve, in the National Forest, lots of, a significant amount of wildlife value. In contrast to any of the other military operations areas that you gentlemen have described as alternatives.

The border, or the overflight area, abuts directly on the Gila Wilderness on a line which is forty miles long. The environmental impact statement glibly states that there will be no impact on the wilderness because none of the proposed supersonic areas directly overfly any wilderness or primitive areas. But later on, in this same DEIS, it states that each boom will affect a twenty-eight square mile area. And for an F-15, at a Mach 1.4, at forty-thousand feet, the lateral spread of a sonic boom may be as much as fourteen miles on either side of the aircraft's flight path. Using this simple logic, which you gentlemen chose not to do, you will be, in fact, impinging, impacting, in an illegal fashion, on three hundred and sixty-nine

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square miles of legally designated wilderness; in fact, the first wilderness area so created in the United States. Included in this area are Willow Creek, Snow Lake, all of the Middle Forks of the Gila River, Mogollon Rim, all of the Crest Trail, the Catwalk, not to mention Quemado Lake, the Blue Range, and parts of the San Francisco River, and adjoining areas. 391 391

To underscore the total disregard for these areas, they go on to say, the Air Force believes that supersonic flight over wilderness is compatible with the Wilderness Act. Fortunately, Judge Ratcliff and gentlemen from the Air Force, this won't be the last opportunity we'll have to deal with you people. This session tonight clearly is just the first of many. We'll be seeing you, I'm sure, in both political and legal ways, in the future. This will certainly be an interesting point to debate.

Our State's Environmental Improvement Department made an additional comment in describing the odds of a pilot even recognizing these boundaries when flying at speeds upwards to a thousand miles per hour in an area supposedly only twelve by eighteen miles. They say that the delineated area--Due to the probable impossibility of confining this added noise impact within the delineated area, adverse and unlawful environmental impact would result from sonic booms on the adjacent wilderness area.

In conclusion, you should be looking for other areas. It is our firm belief that there is no way that

this proposal can avoid violating the spirit of the Wilderness Act, the rights of citizens thereunder, and the intent of the Congress. Wilderness protection is a very important thing for many of us here, particularly those of us who are westerners and would like to see at least a bit of what's left stay the way it was. We see the wilderness as a place of bear, elk, big horn, and not for man's intrusions. Beyond the obvious effects that these booms will have on protected species, and species that great funds of money are being spent on right now--elk, eagle, peregrine, big horn, et cetera--there remains a big question of the effects on humans. Because the impact of the booms is of a magnitude that they will always trigger a startle reflex, much as unexpectedly hearing dynamite near you, twelve times a day, thirty times a day. The body, in its autonomic flight or fright response, is immediately flooded with adrenalin and other hormones. One never acclimates to this sort of stress. Even worse, over time, the body loses its rebounding ability and degenerative damage may result. High blood pressure, peptic ulcers, lowered resistance to various diseases, changes in heart rhythm, and all such things are all symptoms of continued auditory stress and, although harmful, were deliberately left out of this draft environmental impact statement.

It's curious to me that none of these gentlemen, not a single one of them, ever spoke again about human stress or any of the long term results, or any of the

biological aspects of this problem. In fact, I wondered why you tooted them all over here at that point in time. The Air Force denies any adverse human impact on their booms claiming that research needs to be done. Are you not inflicting on us the uncontrolled medical experiment of chronic exposure to the sonic booms? Wouldn't this be something the same as the Food and Drug Administration glibly allowing new drugs to come across the market without doing any research on them? How were we selected to be chosen guinea pigs in this experiment? Although there are some very real and objective scientific problems with the Air Force's proposal, I feel that the real issue is a human rights question. There are thousands of us who live here and I'm surprised that it took Mrs. Smith to tell you that. I think you should feel some shame. There are a thousand of us who live here. We all have rights. How much of New Mexico are we willing to allow the military to appropriate? They already have asserted domain over nineteen percent of our state. Haven't we tithed enough? Shouldn't they be forced to use existing areas more efficiently; for instance, weekends, evenings, holidays, and other periods of time, or train over open water?

I was a little put off by the--I forget at this point--the fifth comment made with the slides in your opening presentation. One of your basic postulates of this entire thing is that you need to search for a military operations area agency, in which to inflict sonic booms,

that has no conflict with any existing operations. We live in a day and time when, all through this nation, we are all learning to live with less; we are all learning to put up with conflicts within our basic resources. And I think it's time that you, gentlemen, realize that there are people impacted by the decisions that you make; and, you may well have to change basic military operations, in some of your other areas, to come up with space for subsonic flights, come up with other places for supersonic flights. You already have enough, you're not going to get it here. (APPLAUSE)

HEARING OFFICER: I'm going to take one out of order. I didn't know until I looked through the slips here that your State Senator, Ben Altamirano, also wanted to speak and, if he's still here, I'd like to simply call on him next.

BEN ALTAMIRANO: Thank you very much, colonel. I think the scenario is very much the same as it was in 1979 when I appeared before. The Air Force Tacical Commander was here presenting his position. I think that the testimony we've heard here tonight was very much like the testimony offered at that time. My position remains the same, as I highly support the endeavors of the people in Catron County, in that they have very legitimate complaints. I was astounded at some of the excerpts that I read from the revised environmental impact statement to find that some of the information was as out of line as it apparently is.

And the testimony has brought it out tonight, also. It just seems to me that it is an attempt, by the powers that be, to force this thing upon the people in Catron County. I hope that testimony tonight isn't taken lightly and every bit of it is considered and that the people in Catron County will have their way and not have to live with these sonic booms. Thank you very much. (APPLAUSE)

HEARING OFFICER: Leonard Leth.

LEONARD LETH: Thank you, colonel. It's pronounced Leth.

HEARING OFFICER: Leth, thank you.

LEONARD LETH: Well, I'm against the Air Force proposal to have supersonic flights over this area here and it's an entirely selfish reason. About two and a half years ago, my wife and I lived in a busy urban metropolitan kind of an environment. I'd worked for a long time in a corporate environment with pinstripe suits and ties, and Gucci loafers. We decided one day we'd just cash it in and go looking for a better way. So we did.

We sold the house and sold the businesses. I put the suits in storage, and we toured around this country, I guess, for about a year and a half. We had certain basic criteria that we were looking for. We wanted a more laid back, quiet, easy kind of life. We wanted a nice scenic area that we could enjoy, but we also still had to make a living.

Then one day, a little over a year ago, we came through Glenwood, and we happened upon the Los Olmos Guest Ranch. For the last several years it had been in a period of decline. It had been once a very popular spot. So we made a deal to buy it and we invested an awful lot of money that we had worked for most of our lives. And we've spent one year now of very hard work, and a lot more money invested, in fixing up the place and remodeling it.

I can see a couple of things happening. First of all, I don't want to have to walk around personally every day waiting for a boom; and two, I can see that it will have a bad economic impact on my business, a thing that we've worked so hard for and have taken so much pride in. I think we'll suffer economically. The kind of customers that we get are the people that like a quiet, laid back, pristine type of area. They come here to hunt, to fish, ride horses, to hike. And, if they've got this kind of booms going on all the time, well, I think that we'll lose some of those customers. It will have a bad effect on the income and the potential that we thought was there and that we've been building for. And if we did try to sell it after this, I think it would have a great impact on the resale value. Like I said, they are very selfish reasons, but I sure hope you fellows don't get your wishes. (APPLAUSE)

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HEARING OFFICER: I would ask again, as you come up, that you would give your mailing address as well

as the name. Ellen Gellert. I believe you are speaking on behalf of the Catron County Ambulance Services, is that correct?

ELLEN GELLERT: Yes, sir, and also for the senior citizens of Catron County. They asked me to speak for them also. My name is Ellen Gellert. My address is Box 734, Reserve, New Mexico. I live in (inaudible) just south of Reserve.

I want to make it clear first that I have an equal concern for ecological effects, as well as with human health effects; but, I will speak specifically to aspects of human health, as that is where my training and expertise is. I'm a certified ambulance attendant in Catron County, and I've been a nursing student, working towards my RN degree. I speak about the Worthington Study that makes it absolutely clear that we have, that humans have nonadaptation to sonic boom noise because of its sporadic and unpredictable nature. It creates incredible stress on the body and, as some have spoken about--Dan Campbell--those stress effects affect the autonomic nervous system and our autonomous system. I would like to list a couple of those effects on the human body, because they are rather extensive.

There is dilation of the pupils. There is a decrease in stroke volume of the heart, which means that the heart cannot pump out as much blood to the body as it needs to. There's a change in heart rate, usually tachycardia--that's a fast heart rate. There's a decrease in

skin temperature. There's vasoconstruction of the peripheral blood vessels, which means that the blood vessels in the skin close up. There's an inhibition of gastrointestinal activity. There's an inhibition of gastric secretions. There's an increase in adrenalin and noradrenalin. There's an increase in steroid production. There's an increase in cortical blood volume, and there is an increase in perspiration.

Now, with all of those effects, there have been numerous international studies, all over the world, that speak about the effect of all these changes on the body. Hans Selye called this the general adaptation syndrome. Hans Selye is a noted author who has done many years study on this. He makes it clear that we have no control over these responses of our body. Our bodies respond no matter whether we are awake or asleep. I think it's not surprising that we see that stress, at least, the hypertension, ulcers, GI disturbances, and cardiovascular effects.

394 Now, in the DEIS, there is some acknowledgement of the startle response, but there's no consideration at all of what these effects are all the time. We are talking about going through the sonic booms for possibly years. 394.

I want to make a quote, too, from page 3-14 of the DEIS where it says, quote, there is "...a tendency for sonic booms exposure to degrade the performance of certain visual, steering, and tracking tasks,..." We are talking about people driving on curving mountain roads. We're talking

about men working with horses and livestock, and will bring real dangers of injuries. I'm an ambulance attendant, I have to haul these people out of here. We're talking about people being way out in the country. We're talking about people, that I have to drive sometimes an hour and a half to the closest hospital to get an injured person, or a person with a stroke, or a person with heart disease, or a person who is having a heart attack out of here. We do not need to increase our health problems in this area. We also have a very large elderly population. The elderly are especially susceptible to these effects. As an EMT, I'm concerned about how to transport patients suffering heart attacks, strokes, bleeding ulcers, in critical states, over long distances.

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One last thing, on page E-22 of the DEIS, the U.S. Air Force considers these "indirect" effects, and you consider them "an open question". May I remind you that thalidomide was an open question in the early 1950s before we found out what its effects were. It was twenty years before there was a clear connection between cigarettes and cancer and emphysema, it was another open question.

You're asking us to be guinea pigs for your supersonic training. I choose not to be a guinea pig and I don't want to see the elderly people, or any people in this town, to be guinea pigs for your supersonic training. Thank you. (APPLAUSE)

HEARING OFFICER: Lauren Cressman. While she is getting ready, let me say, I think it is fortunate, indeed, to have the young people who have taken an interest in matters that relate to your community and, apparently, are giving thought to it themselves and, I would gather, are making their independent decisions. Certainly your comments are very much welcome. If you would proceed, state your name and address, and give us your statement, please.

LAUREN CRESSMAN: My name is Lauren Cressman. My address is Box 6, Luna, Dogie Ranch, 87824.

We have been buzzed several times by these low flying planes. One of these times, Jamaica and I were in the barn and one of these planes appeared and we flattened ourselves against the gate and the horses wheeled out of the barn and we nearly missed being trampled. And another one of these experiences we had, we have a two year old stallion and we were cross-tying him and just putting kids up on him. He doesn't know much about it. We were putting kids up on him. He was doing very well, and I was up on him and we heard a plane coming and I got off immediately and he started to rear and Mary held him. He started to try to break loose and get out of the barn and the plane came five hundred feet above our barn doing twists and turns.

HEARING OFFICER: Thank you. (APPLAUSE)

HEARING OFFICER: Howard Hutchinson.

HOWARD HUTCHINSON: My name is Howard Hutchinson. I live at Route 10, Box 484, Glenwood, New Mexico 88039. I lived at Holloman Air Force Base as a child. I lived in Alamogordo. I watched the planes fly around, and still, to this day, find a certain amount of enjoyment in seeing aircraft in the sky. I don't find, though, any particular enjoyment in seeing the uniform, that my father wore, on people who are trying to impose something on Catron County that he wouldn't do. I think that a lot of times economic considerations are allowed to outweigh human considerations. I made a statement at the first meeting stating those same things. I didn't get a response at that time; I don't expect to get a response this time. 396 396

Again, I say, this is unfortunate that the people of Catron County have to take their valuable time to even be here. We've gone through this one time. For the four years since then we have also had periods of: Well, maybe the DEIS is coming out again, and then it didn't. And then another month would go by and the DEIS was coming out again.

I do a small newspaper for the county, and the Air Force assured me by telephone, and not only to myself, but to the members of the Catron County Commission, that they would notify us whenever any particular actions were to take place. We never received prior word about public meetings, about the air Force being in the county to conduct personal interviews. It was as if the Air Force just

thought, well, we really don't need to inform these people what we're doing.

The document reflects that same attitude. When I was in college, had I turned in a paper like this to one of my professors, they would have returned it and said, "You'd better go back and study some more." Because they would have rejected it. It is incomplete. And it is no more complete than the original document was. I hope that another four years doesn't pass and, again, we have to assemble to address all the same issues to all the same people and come away empty handed again.

There are other alternatives. The Air Force has stated there are other alternatives, and they have masked the other alternatives to make it look like they aren't alternatives. I would advise everyone in the county to read the document and without a great deal of thinking, they can come to the same conclusions that I have and as many other people have that it is not a complete document and deserves an F grade, as many of my professors would have turned it back to me and said it deserved also. Thank you. (APPLAUSE)

HEARING OFFICER: Charles Breidhaupt.

CHARLES BREIDHAUPT: Charles Breidhaupt, PO Box 617, Reserve, New Mexico.

I would like to start out by saying I'm a relative newcomer to the Reserve area. I spent probably

all my life trying to get into an area that I felt like was the best in the world, and I think it is here. I think this is the greatest country in the world, too. I spent four years in the Navy, from 1959 to 1963. I was in the naval aviation as an aircraft maintenance mechanic. I also flew as a second crewmember, as a flight mechanic.

397 Fortunately I can't believe that the Air Force can't find the money to go over the ocean and do their high speed flying. If they have to air refuel, that would be a good test time for the air refuelling squadrons to do what they do best. 397

I also feel like my experiences with the military is that they don't really give a hoot about the little guy. They're just interested in what they want. And at one time, I was an ammunition hauler for big guns on the ships. I've heard sonic booms also on the aircraft carrier Kitty Hawk. Believe me, they'll knock you right out of your socks. And those big guns, the military didn't even care enough about the people that were loading those guns and hauling the ammunition to give them earcovers so they wouldn't have to listen to that horrible noise. And I feel like it is not fair. I believe in the democratic system and if I have to come here every night for the rest of my life, I'm not going to have those sonic booms. And I feel like a lot of these people in this community will be here with me every night, if I have to be here. I'll take the time. I work twelve hours a day six days a week and I'll take the time

and write my Congressman, and I'll write the Air Force, and I'll write whoever is necessary, but I'm not going to listen to that. Thank you, gentlemen. (APPLAUSE)

HEARING OFFICER: Esterly Flores. Do I understand you will submit a written statement?

ESTERLY FLORES: I will mail it to the appropriate address, yes.

HEARING OFFICER: Alright, thank you. Barbara Rothman.

BARBARA ROTHMAN: Barbara Rothman, Box 218, Glenwood, New Mexico. Yes, our Air Force can learn something from Catron County; but, not from practicing dogfights and thereby endangering people in all the towns below them from the tremendous sonic booms that will be produced.

Members of the Air Force can reinforce their love for their country here, the quality of love for their country and respect for all that are a part of their country, including people, can be found in abundance in the people here. I think that this develops by allowing the land to have an effect on you. Here, as you drive a few roads, fellow drivers wave to each other. If a camper, hiker, or hunter becomes lost in the wildnerness, a county volunteer search and rescue

squad will save him. Just recently, after the flood we had here, neighbors helped each other rebuild dikes. My neighbor did such a gentle, but effective job, that he saved even slender young trees from being killed as he worked around them with his dozer. Do not underestimate a love for our country as an effective weapon for winning a war. I dare you to tell me of any war that was won without an intense love of country.

I cannot understand how a good pilot could practice above people, his own country's people, and know that he was endangering the very country and people he resolved to protect, or how those above him could order him to do this. This, I would think, would destroy morale. If our Air Force truly has control of this most powerful weapon, love of their country, our country, they will conclude that it is in their best interests to find a place that has the least impact on this country, and it is definitely not over people. Thank you. (APPLAUSE)

HEARING OFFICER: Lee Robertson.

LEE ROBERTSON: I'm Lee Robertson, Apache Creek Deaf Ranch, Reserve, New Mexico 87830.

I didn't know for sure the letter would get here, so that's the reason I'm here tonight. I'm the fellow that tries to keep all these kids on the horses. We take out about

398 ten riders, sometimes seven rides a day. And I don't know how these booms are going to be, or where they're going to be, but I know a horse can't stand it. 398

As they said in the letter, we do have the deaf here during the summer, and you can't explain to them when the boom is coming and I can't tell them dumb horses they're coming either. But I don't know how it's going to work out. So all we're here for is to represent the ranch.

This last summer, we had over a thousand kids there. And that's my job, to keep them riding horses. Most of the kids that come out here, they think they're coming to the wilderness, and from what I see, it is the wilderness, and they enjoy horse riding. And we'd like to see this stay to where we can keep the kids going. And not have to forfeit what they're coming out here to enjoy each summer. And I've watched everything you've talked about here tonight and

399 I'm not sure exactly how much booms we're going to get. We get enough of them as it is, without extras coming in here. So we just want to go on the record that we're not for a bunch of booms coming around here. We're trying to entertain kids during the summer time and let them have a good time when they come to the ranch. Thank you. 399

(Applause.)

HEARING OFFICER: Chiana Klinkor. I hope I got close on that name.

ARIANA KLINKOR: My name is Ariana Klinkor, P.O. Box 214, Reserve, New Mexico. I'm in the eighth grade and I feel sonic booming will affect my school and school work if I hear a low level boom while in class. I also feel sonic booming might affect the ranching businesses in Reserve. Another thing is, I, for one, know that when my horse hears a loud noise, she gets very jumpy and afraid. And if I'm riding one of our horses, and a loud noise occurs, the horse might end up in the next state. What effects will these much louder sonic booms have on livestock? 400

In closing, what is the economic effects of booming on small towns which are being boomed over without including large surrounding cities? Thank you. (Applause.) 401

HEARING OFFICER: Kathy Schrader.

KATHY SCHRADER: Gentlemen, my name is Kathy Schrader. I reside at P.O. Box 634, Reserve, New Mexico.

There have been questions concerning property damage. In Austin, Texas, at Bergstrom Air Force Base, I received close to twenty-four hundred dollars in damage from a sonic boom. The first thing I had to do was to prove it was the sonic boom that broke three four by six plate glass windows, which I did. The second thing was, when I had the windows replaced, I had to hand the man the cash right there. He wasn't interested in insurance, Air Force, or anybody else. As it turned out, it took me

three years to collect from the Air Force for property damage in the amount of eight hundred and seventy-five dollars. They tried to lay the rest of it off on my home owner's insurance, and I was out the rest of the money. Thank you. (Applause.)

HEARING OFFICER: Lynda Turner. I see that there is a written statement indicated here. Is Lynda here? Has she turned in her statement? That will be, of course, made a part of the record.

I believe the next name is Ernie Gallagher. (Laughter.) I didn't get it right, obviously.

ERINNE GALLAGHER: My name is Erinne Gallagher and I'm from Reserve, New Mexico. I'm sure when those people from Holloman Air Force Base do sorties over us, they do affect the wildlife and health of the people. Also, what is the difference between flying sorties over large populated areas and flying them over small populated areas? Because people are going to react the same way. So what's the difference? Thank you. (Applause.)

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HEARING OFFICER: That represents the last of the slips that I had indicating individuals who desired to make oral statements. Let me, at this time, ask if there is anyone who has a written statement that you wish to submit. And, if so, I would like, of course, for you to give your name and address the same as with the others, and give it to the reporter.

HEARING OFFICER: Is there anyone that has a written statement that they wish to submit at this time?

Apparently not. It may be that someone has a desire to make a statement, but did not fill out a form, and, if that be the case, I would like to give you that opportunity at this time and I simply ask that you hold up your hands.

Yes, sir, if you would, please.

EARL PITT: My name is Earl Pitt, Post Office Box 647, Reserve, New Mexico. I live seven miles up here at what's called the Y. I have listened to all of this tonight and I'd like to say, first, gentlemen, I thank you for World War II. You boys were not there, but some like you were. You saved my life several times.

Another thing is, I'd like to say that tonight this meeting started without asking God's permission and God's help. Personally, I think this country was founded on the beliefs of God and the guidance of God and Jesus Christ. And, again, I think that you boys would not be up there if it hadn't been for that guidance; and you wouldn't stay there, if it wasn't for that guidance now, with all of us here on the ground praying for you daily. I do. I thank you again.

And I thank you, sir, for your guidance of this committee and all the people that are working to keep this country free, to keep it out of the Communists' hands. We

had trouble with this before, but not with the Communists, but something just as bad. I don't know just how bad the Communists are, but maybe you fellows do. Maybe you have had rumors through the government that we haven't known here on the ground. But I would like to say, like the boys from Nevada that are here, are we leading to the same thing that the Communist countries are? Are we heading in that same direction? Are we going to be controlled entirely by a military power? Do we pay our taxes to you to dictate to us what we have to take from you? I ask you, be with Christ. Keep it in your heart as to why you are doing the things you do and why you are carrying out the job the way you are. I thank you, sir.

HEARING OFFICER: Are there, then any other statements to be made? I see one more hand.

JIM DORMAN: My name is Jim Dorman. Our address is Apache Creek Route, Reserve, New Mexico.

In listening to the conversation tonight, quite a few points have been brought out concerning this study and, subsequently, erroneous material presented. I guess, within myself, I had to laugh a little bit.

I spent twelve years flying with the Strategic Air Command. I flew two years as a pilot for the Commander, Eighth Air Force. I taught at the Air University. We tried to teach a professional program there where

people would do good research and get their facts straight. I see it hasn't changed much since I left. I also used to hear General Sweeney tell us lots of times, "I don't care how you do it, get it done, and this is the way it's going to be." And I don't think that has probably changed too much since I left, either.

I spent seventeen years flying with Pan American World Airways. I just retired. We sold a home in Tucson, Arizona, and looked diligently for some beautiful country land, where it's quiet and peaceful, and we could enjoy our lives farming, ranching, in peace and quiet. And, I guess, from a selfish point of view, I also resent the supersonic booms moving here. Even after thirty years of flying, they kind of get to me, because I moved up here to get away from that and the aircraft noise. Basically, I don't even like to hear them fly over anymore. And I realize that you can't ask for all that, and I understand, from my background, that a lot of this training is necessary. But I also feel that if we really get down to the basics, we can find a solution which will not put such a strong imposition here on the people in Catron County and which will still enable the Air Force to accomplish their mission.

And I think one other comment that was heard here in one of the earlier sessions was that the commanding officer did not like his men flying on weekends and holidays. But I know, when I accepted my commission and

became a regular officer, that I was expected to be working twenty-four hours a day, seven days a week, if that's what we needed. And I can't tell you how many motivational talks I've heard and you guys have probably heard the same way, this is the way it has to be. And then when he comes and tells us as civilians and pulls on the sympathy cord, I have to take it a little tongue-in-cheek, because I know you guys in the crew rooms and ready rooms don't always hear it that way. And I think there can be a different solution, and I hope we can work it out because I would hate to think so much of my life that I had spent working in the air, looking for a time when I could relax and enjoy the peace and quiet of the country--and you just don't find country like this all over--is going to be ruined because of some training requirements.

I wish you guys well, though, and thank you for being here. (APPLAUSE)

HEARING OFFICER: Thank you. I see one other hand, or I can see two other hands.

I'll say this, and I'm going to bring it to a close very shortly, not that I don't want to get the comments, but if you have nothing really different to say, something additionally factually to be added, then, of course, those are the things that I think everyone would be interested in hearing. I will recognize these two

individuals who have just held up their hands and then I'm going to call it to a close unless, for some reason, I get an indication that there is something really different to be said at this point. Yes, sir.

BUCK HALLOWAY: First of all, I would like to say thank you to Mr. Rothman and to Mr. Campbell for the effort they put into their presentations tonight.

HEARING OFFICER: Would you please give us your name and your address.

BUCK HALLOWAY: My name is Buck Halloway, P.O. Box 824, Reserve, New Mexico.

HEARING OFFICER: Thank you very much.

BUCK HALLOWAY: I can only say that I wish the Air Force had been as prepared as these gentlemen were. They don't seem to have any answers for the questions that Mr. Campbell and Mr. Rothman posed regarding the improper facts that were presented in their reports involving Valentine.

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Second of all, at the beginning of the meeting, you asked that people avoid expressing opinions. Well, part of the character of the people who live in this county is a certain amount of fierce independence that that opinionation involves. So I think that the people who came and wanted to express their opinions should have been allowed. The opinions; isn't that basically part of the freedom of speech?

Now I think the opinions of the people should weigh very heavily on the minds of the Air Force when making a decision whether to continue the supersonic flights over Catron County, and I believe that the people here will agree with me for the most part. (Applause.)

HEARING OFFICER: Thank you. We have a young lady back here, I believe, who had held up her hand.

CATHY PERALTA: Thank you, sir, my name is Cathy Peralta. I live at Crystal Route, Reserve, New Mexico. I'm a native here. I've lived here for twenty-two years. When I first came here, I wasn't going to say a word. But this is my home and what the Air Force is trying to do is, is going to do, what I feel is ruin my home. Because it's pretty primitive out here, it's wilderness. We're supposed to be set back in culture at least ten years. But it's nice here, it's quiet, and it's a relaxation that people need in order to get away from the city and the so-called noise.

The physical aspects have all been discussed here tonight by different people. But what people haven't really discussed in a whole lot of depth is, if you would have looked around here tonight, there was a lot of children here. Children are our future. And this is pretty much, if you look at it, a political entanglement. It's who has the most power. And we are a small community; we don't have a whole lot of power. But the kids have somewhat discussed it in school and they've been here

tonight and listened to the arguments. Some of them are still here. And this is a lot of political baloney, I would call it, and we need the young people to start believing in our judicial system and when you pull something like this, they lose the hope and the faith they need in order to make our country what it is. And there's a lot of crime in our country now and I think a lot of these kids just don't have respect in the law, or even the older people don't. I think that when you pull something like this, you need to--if you wanted them to wait, then it needs explaining. Thank you. (Applause.)

HEARING OFFICER: Thank you. As has been previously indicated, I just want to call it to your attention again, that if you desire to make a statement, written statements may be made and submitted up through the 4th of November. And, in case you do not have the address to which it is to be sent, let me just give it to you at this time, if you've got a paper and pencil handy. And I'll repeat it if necessary. It would be to: Headquarters Tactical Air Command, and you can simply abbreviate that with HQ, a space, and then capital letters TAC, and then a slash mark, and then the capital letters DEEV--those of course, stand for the particular office that these will be going to within the headquarters--Langley Air Force Base, Virginia, Zip Code 23665. I'll repeat that again: Headquarters TAC/DEEV, Langley Air Force

Base, Virginia 23665. And you certainly may submit anything in a written statement, that you might desire, to that address. And once again, it should be sent so as to arrive not later than 4 November 1983.

I would at this time like to, once again, express the same appreciation to everyone who came, and particularly to those of you who have remained up until this very last minute. Is there anything otherwise that someone feels that is of such importance that it needs to be indicated for the record? If not, then at this time this public hearing is adjourned.

(The hearing adjourned at 2322 hours.)

C E R T I F I C A T E

STATE OF ARIZONA)
) ss:
COUNTY OF PIMA)

I, LOUISE S. SHIELDS, Closed Microphone Reporter, DAFC, GS-8, and Notary Public within and for the State of Arizona, do hereby certify that the foregoing transcript, consisting of pages 1 through 136, inclusive, is a true and correct transcript of my stenographic notes and of an electronic recording device utilized as a backup taken simultaneously, to the best of my ability;

THAT, I do not certify to all spellings of proper names, except that they are written as best as they could be heard and/or referenced on the speaker registration forms, in the local telephone directory, the public records at Catron County Courthouse and the Catron County Precinct Map;

THAT, there are some few inaudibles shown due to audience noises.

THAT, all prepared statements submitted to me are attached as Attachments 1 through 8.

THAT, I am not a relative of nor attorney for any of the participants herein, nor am I interested in the final decision in this matter in any way.

DONE this 8th day of November 1983, at Tucson, Arizona.

Louise S. Shields

LOUISE S. SHIELDS, DAFC, GS-8
Closed Microphone Reporter and
Notary Public
My Commission Expires: 2 Jan 87

Exhibits of:

Steven I. Rothman
P.O. Box 218
Glenwood, New Mexico 88039

#1

ROTHMAN: EXHIBIT A

10 seconds about me...

"MITRE" = not for profit, Act of Congress,
systems engineering, environmental analysis

AIR FORCE - Tactical Air Command
NASA - Johnson Space Center
NORAD - air defense with Canada
EPA, ERDA, etc. - Washington, D.C.

Pentagon...

They trusted me then to make an objective analysis, that they could not get from their own men. I am doing the same now.

ROTHMAN: EXHIBIT B

~~SECRET~~

(U) 3.2 Water Quality: Sufficient potable water exists to handle the proposed mission change and the later increase of approximately 200 "temporary duty" (TDY) personnel which will be temporarily assigned to Holloman AFB for training.

(U) 3.3 Solid Waste: Except for contaminated fuels and waste generated by the additional personnel there will not be a significant increase in the generation of solid waste.

(U) 3.3.1 Landfill: The existing base landfill is adequate to handle additional solid waste generated by the additional personnel. No problems are anticipated.

(U) 3.3.2 Contaminated Fuel Reclamation: Holloman has one underground storage tank -- capacity 10,000 gallons -- for temporary storage of contaminated fuels. This product is utilized for fire-fighting training (within EPA standard) and is sold to other government agencies, for example, Navy Research and Development or Defense Supply Agency for reclamation.

(U) 3.4 Noise

(U) 3.4.1 Sonic Boom: Air Force Regulation 55-34 concerns reducing flight disturbances. In general, supersonic speeds are prohibited in populated areas. In the Holloman AFB area, supersonic flight is authorized only over uninhabited portions of the White Sands Missile Range not adjacent to populated areas. Supersonic flight will be a routine part of all air combat maneuver (ACM) training missions and some Ground Controlled Intercept training missions. With the increased percentage of total training hours applied to this type air-to-air training there will be an increase in the number of supersonic events, from approximately 550 per year with the F-4 to approximately 1300 per year with the F-15. ~~T-38 supersonic~~ training will increase from approximately 450 events to approximately 1200 events per year; however, due to ~~the size of the aircraft and~~ the short duration of supersonic speed (10-15 seconds) it is not anticipated that ~~the increase associated with the T-38~~ will be noticeable outside the range. F-15 and T-38 activity will take place within the restricted airspace controlled by White Sands Missile Range. The airspace overlies unpopulated desert plains and sonic booms generated during the training will not be perceived outside the boundaries of the White Sands Missile Range.

~~SECRET~~

ROTHMAN: EXHIBIT 'C'

(U) 3.7.1.2 Since there are no known historical or archaeological sites located on Holloman AFB, construction activity will have no impact on properties included in the National Register of Historic Places, structures identified in compliance with Executive Order 11593, or any other known historical or archaeological sites.

(U) 3.7.2 Airspace Requirements: Figure 3.7.2 A and B depicts the anticipated operational area of the F-15s and T-38s assigned to Holloman. Continuation training will be conducted for the most part in the Restricted Airspace controlled by the White Sands Missile Range. Within this restricted airspace are located the Yonder Air-to-Air Gunnery Range, the Yonder Extension Air Combat Maneuvering (ACM) Range, Oscura Air-to-Ground Scorable Gunnery Range, Red Rio Air-to-Ground Tactical Range and the Ground Controller Intercept (GCI) Yucca Training Areas. Additional airspace at the YUCCA, Talon, and Beak MOAs and the McGregor restricted areas will be used as required. These are the same areas currently being used by F-4 and T-38 flying activities. No additional airspace is planned to support the transition from F-15 to F-4 aircraft or the increase of T-38 aircraft.

(U) 3.7.2.1 Low Altitude Training Flights: Low level navigation training flights at 500 to 1500 feet above ground level are usually conducted in conjunction with the delivery of practice ordnance against ground targets at one of the air-to-surface ranges. Present F-4/T-38 mission has an annual usage of published low altitude routes, outlined in paragraph 3.4.1.4, of 3914 times. Proposal action will result in an annual total of 2539. This is a reduction of 35% in annual usage of the published routes. Although it is insignificant because low altitude routes are selected to avoid populated areas and conflict with sensitive wildlife areas and flyways. The airspace through which the flights pass will experience an imperceptible decrease in air pollutant emissions.

(U) The low level routes to be used and their approximate yearly usage rates are listed below. A comparison with current F-4 and T-38 usage rates is also included.

ROTHMAN EXHIBIT 'D'

(U) 4.1.3 SELECTION CRITERIA

Tactical Air Command (TAC) has been designated to receive the first three operational F-15 wings (such as the proposed action for Holloman AFB) as well as provide for the operational testing and evaluation (OT&E) program and conduct the Combat Crew Training (CCT) program. Criteria, in order of priority, for selection of a beddown location is as follows:

(1) Well suited within the Continental United States (CONUS) for overseas deployments. Ancillary consideration is given to the possible integration into the CONUS air defense role.

(2) Air Combat Maneuvering (ACM) airspace with unconstrained use and no altitude limitations - preferably over water or other area of limited use by civil/general aviation. Instrumented ACM* range is desirable, but not mandatory.

(3) Good Year-round flying weather - no extended periods of weather below 2,000 ft cloud ceiling and three miles visibility and 200 ft cloud ceiling and one-half mile visibility.

(4) Air-to-air and air-to-ground ranges in close proximity.

(5) Acceptable environment.

(6) Minimum facilities deficiencies/reasonable cost.

TAC installations and facilities throughout the Continental United States (CONUS) are generally located in those areas which are optimum for operational and training requirements, and possess the general facility and security assets normally associated with tactical aircraft operations. In determining the basing of the F-15 weapon system, a significant and possibly the overriding factor is required maneuvering airspace. From the initial conception of the F-15, the flight envelope design has afforded a new and unique capability in Air Combat Maneuvering (ACM). It is desirable to exploit and to enhance the capabilities of the airplane in both initial and continuation training for the F-15 aircrews.

It is anticipated that the F-15 may be called upon to perform the air defense role; therefore, proper geographic positioning to allow integration into the air defense role and still retain responsiveness to worldwide deployment contingencies becomes important in acquiring ACM airspace for F-15 flight operations.

*An instrumented range allows radar coverage of the air-to-air activity in the ACM area to be videotaped and replayed to the air crews upon landing. This technique allows the aircrews to recreate and critique actions which they took during the very fluid and dynamic period of aerial combat maneuvering.

ROTHMAN EXHIBIT 'E'

which requires refueling support on a daily basis appears to be impractical due to excessive cost, nonavailability of adequate airspace time and tanker support. Inflight refueling was also considered as a means of utilizing the Nellis Range supersonic airspace located 500 miles west of Holloman. Compared to the Sells MOA, the Nellis Range airspace is located a greater distance from Holloman and has less range time available. Because of the costs, the Nellis airspace is not a feasible alternative.

1.2.1.3 Temporarily Deploy Holloman Units to Satellite Operating Locations to Obtain Supersonic Sorties: The following paragraphs analyze the feasibility of obtaining supersonic sorties by temporarily stationing Holloman units at operating locations with access to supersonic airspace. Before this discussion, however, it is important to review factors for not relocating either the 49th TFW or the 479 TTW.

In the environmental evaluation for the beddown of aircraft at Holloman AFB, over 84 alternate bases were evaluated for the F-15 beddown and 89 bases for the T-38 operations. Holloman is considered to be the optimum location for the F-15 and T-38 aircraft beddown based on the following criteria:

(1) The location is well suited for overseas deployments from the Continental United States. Additionally, F-15s positioned at Holloman enhance air defense capabilities in the south central portion of the United States.

(2) Airspace in the vicinity of Holloman is capable of supporting supersonic flight activity over sparsely populated areas.

(3) Holloman is characterized by good year-round flying weather with no extended periods of weather below 2000 feet (cloud ceilings) and three miles visibility.

(4) Live ordnance air-to-air (F-15) and air-to-ground (T-38) gunnery ranges are located near Holloman so that transit time enroute to and from the ranges is minimized.

(5) Existing base support facilities required only limited new construction to accommodate F-15 and T-38 operational requirements.

(6) The placement of both wings at Holloman resulted in a net increase of 70 personnel as opposed to the 770 decrease in base personnel that would have occurred if the T-38 wing had been located elsewhere. The desirable operational attributes of the Holloman location and the high costs normally involved in moving to and setting up operations at another base make relocation of either the 479th TTW or the 49th TFW very costly, and operationally impractical.

Area residents have suggested that the 49th TFW be relocated to a Texas Gulf Coast military base to conduct supersonic flights over water. Proposed locations near over water supersonic areas were evaluated and eliminated from consideration based on one or more of the following reasons:

2-150

FROM RESERVE DEIS EXHIBIT 'F'

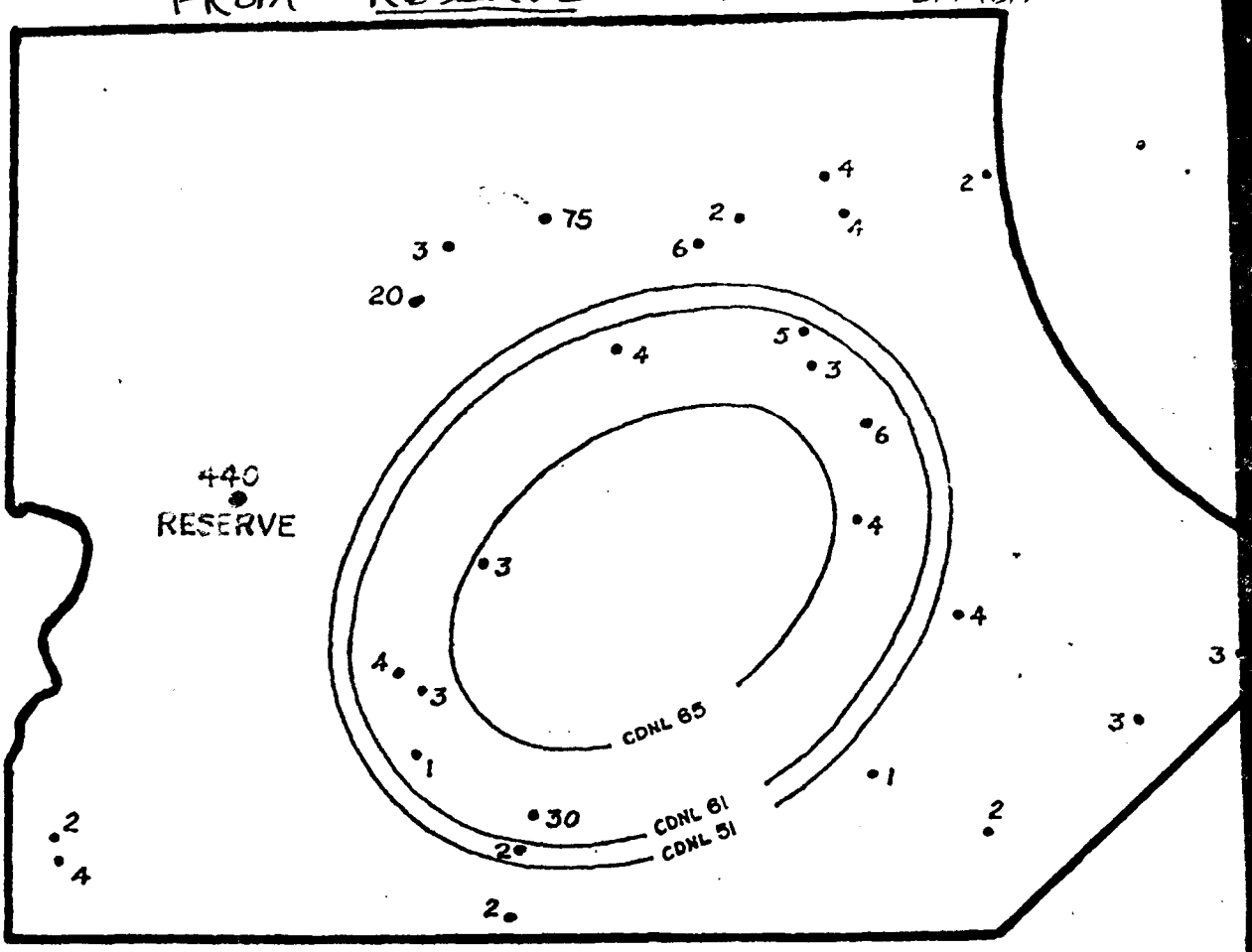


FIGURE 16
NUMBER OF PEOPLE IN THE RESERVE MOA - ALTERNATIVE

↑ 600 actual/mo
↓

Table 10

Number of People in Ellipses at the Reserve MOA

	CDNL 65 Ellipse	CDNL 61 Ellipse	CDNL 51 Ellipse
Total People in Area	3*	60**	2
% Highly Annoyed	22.7	13.7	3.3
Number of Highly Annoyed	0.7	8.2	0.1

1/ 300, often only 6 "annoyed"

* Present during fire season.
** Thirty-four of the sixty are present only during the fire season.

(About 650 people shown)

FROM VALENTINE DEIS

EXHIBIT 'G'

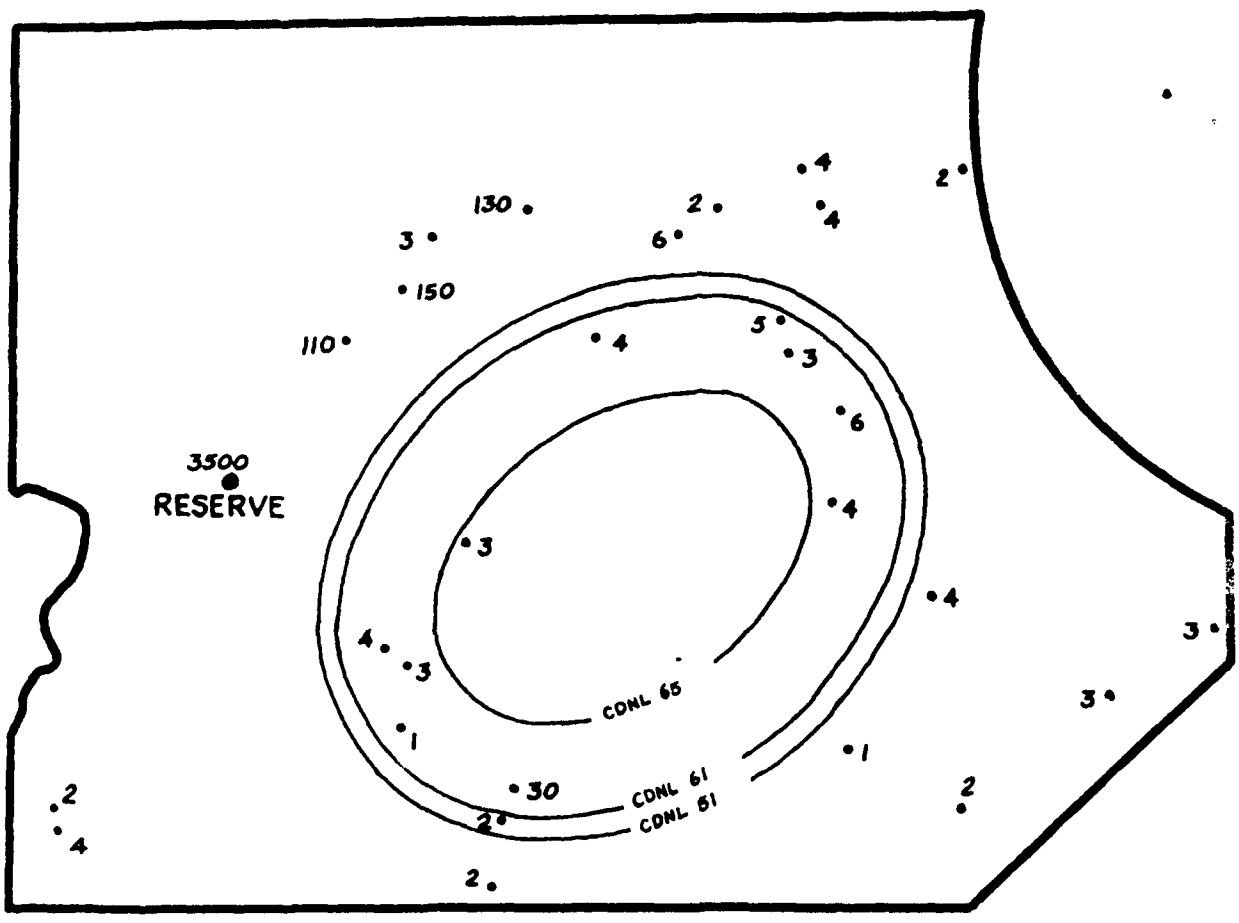


Figure 16 Number of People in the Reserve MOA

Table 10

Number of People in Ellipses at the Reserve MOA

	CDNL 65 Ellipse	CDNL 61 Ellipse	CDNL 51 Ellipse
Total People in Area	3*	60**	2
% Highly Annoyed	22.7	13.7	3.3
Number of Highly Annoyed	0.7	8.2	0.1

* Present during fire season.
** Thirty-four of the sixty are present only during the fire season.

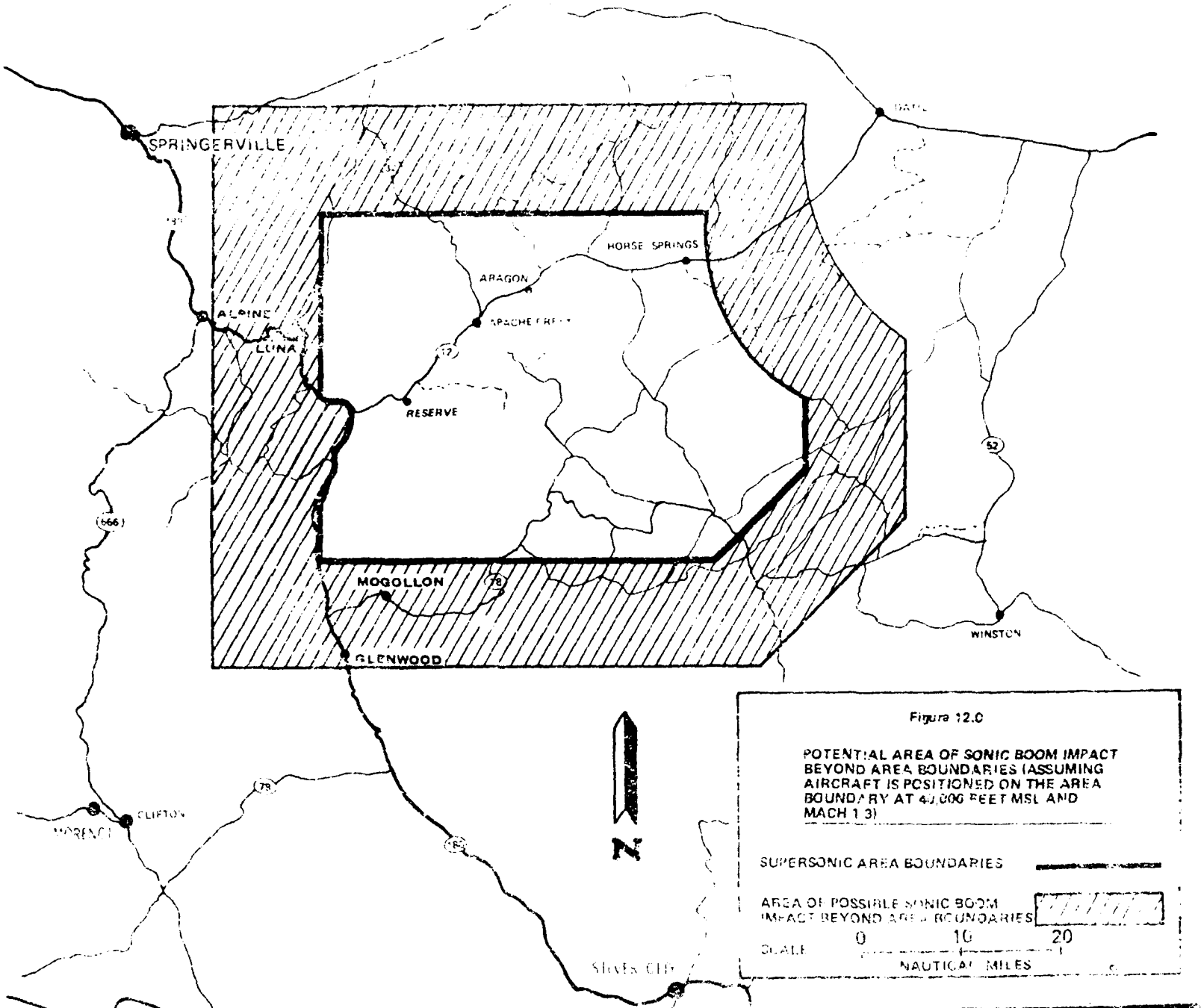


Figure 12.0

POTENTIAL AREA OF SONIC BOOM IMPACT BEYOND AREA BOUNDARIES (ASSUMING AIRCRAFT IS POSITIONED ON THE AREA BOUNDARY AT 40,000 FEET MSL AND MACH 1.3)

SUPERSONIC AREA BOUNDARIES

AREA OF POSSIBLE SONIC BOOM IMPACT BEYOND AREA BOUNDARIES

SCALE

ROTHMAN'S EXHIBIT 'H'

ROTHMAN: EXHIBIT 'I'

TABLE XII

TEST HOUSE NO. 4
SUMMARY OF INSPECTION FINDINGS
INTERIOR DEFECTS

	Week No.	Loose or "Popped" Nails in Gypsum Board: Ceilings	Walls	Total	New Cracks	Extensions of Old Cracks	Misc. Interior Defects	Total Interior Defects
BOOM PERIOD	1			0	7	3		10
	2			0	15		1	16
	3	2		2	6	5		13
	4	1		1	6	1		8
	5	1		1	4			5
	6	3	3	6	2	2		10
	7		1	1	2	3		6
	8	1		1	2	2		5
	9	8	3	11	13	2		26
	10	2		2	1	3		6
	11	19	41	60	7	4		71
	12	3	3	6	4		1	11
	13		1	1	7			8
	14	7	40	47	2	2	1	52
	15	2	21	23	6	2		31
	16		18	18	2	1		21
	17	4	4	8	2	2		12
	18	2	13	15	1			16
	19	4		4		1		5
	20	2	15	17	2	1		20
	21	10	11	21	2	1		24
	22	9	7	16	6	2		24
	23	10	35	45	4		1	50
	24	3	4	7	3	3		13
	25	4	6	10	2	3		15
	26	6	17	23	7	1		31
	TOTALS	103	243	346	115	44	4	509
AFTER BOOM PERIOD	27	4	1	5			1	6
	28	1	15	16	1			17
	29		1	1	3	2		6
	30	4	4	8	1	1	2	12
	31		5	5	1	1	1	8
	32		13	13	5			18
	33		6	6	1			7
	34		1	1		1		2
	35		3	3		3	2	8
	36	1	13	14		2		16
	37		11	11	1			12
	38	3	8	11				11
	39	1	9	10	1			11
	TOTALS	14	90	104	14	10	6	134

Construction Engineering Research Laboratory could be used. A satisfactory program would probably require of the order of 10 measurement systems in the field for about one year. During this time most of the instruments would be moved from one set of sites to other sets a number of times in order to obtain adequate geographic coverage.

The duration of the measurement period at any one site would be a function of the number of individual boom measurements obtained in a period of, say, one to four weeks. This period is likely to be shorter near the middle of the ACM area, and longer near the edges. These durations are related to both the frequency of occurrence and the variability of SEL for a given boom strength. That is, underneath the flight path variability in SEL from flight to flight is likely to be much less than at lateral distances greater than 0.8 times the predicted cutoff distance.

Upon completion of the measurement program, the results should be used to modify the CDNL prediction program as necessary. It may turn out that an entirely different modelling procedure may be advisable.

4.2 Effects of Sonic Booms on Human Response

Principal uncertainties in the prediction of human response are the choice of acoustical descriptor and the validity of a cumulative exposure measure such as DNL or CDNL for describing human response to randomly occurring, infrequent, impulsive noise events. Of equal uncertainty is the applicability of noise response information inferred from a suburban-urban population to people living in the very low population densities of rural areas most likely to be subjected to some booms from USAF operations.

3.2.4.2 Fire Management: Gila National Forest personnel indicate that supersonic flight operations would have little or no impact toward management of fire if a minimum altitude of 15,000 feet MSL is maintained by training aircraft. The highest expected altitude required by fire fighting aircraft is 13,000 feet MSL. In the event that higher altitudes were required or training operations did conflict with a particular fire fighting operation, FAA officials would temporarily close the area for Air Force training operations.

3.2.4.3 Socioeconomic Conditions:

3.2.4.3.1 Economic Considerations: In order to evaluate potential impacts of supersonic operations in the Reserve MOA, an indepth study of the areas past and current economic characteristic was conducted. Economies of four existing supersonic areas (White Sands, NM; Gladden and Sells, AZ; and Desert, NV) were analyzed. Lessons learned from study of sonic boom impacts on the four control MOA's were applied to the analysis in Reserve. The study, "Economic Impact Study: Valentine and Reserve Military Operations Areas", 1980, is summarized in the following paragraphs. Most significant is the finding in the Gladden MOA (near Phoenix, AZ) that sonic booms appear to have in no way deterred a strong trend toward retirement home development and vacation ranch visitation.

Investigations into other sectors of the economy indicate that no significant impact has occurred in the four control MOA's due to sonic boom activity. All of these sectors of the economy that were investigated are discussed in the following paragraphs.

3.2.4.3.1.1 Population: The number of people in Catron County peaked in about 1940 when approximately 4,900 residents were counted. This number declined until about 1970 to a level of 2,198. Since 1970, growth has occurred with a 15% increase between 1973 and 1976, but showed an 8.5% increase into 1977. The 1980 population of Catron County has been estimated at approximately 2,600.

Population projections to the year 2000 suggest that Catron County will remain at about 0.2% of the state's population. Population is projected to increase at a slightly higher rate than the state as a whole between 1980 and 1985 (11.5% for Catron County vs. 10.8% for New Mexico). The 1985 to 1990 growth rate is expected to be 9.7% for the state, a faster pace than the county's growth rate of 6.9%. The growth rates between 1990 and 2000 for both the county and New Mexico are projected to be approximately equal. Catron County's population in 2000 is projected to be about 3,600, an overall 38% increase from 1980.

Analysis of sonic boom activity on population of the four control MOAs indicates that each has had a net gain in the number of residents since 1970 as well as since 1960. Rates of growth vary from year to year, sometimes being negative for short periods, and on the whole range from relatively slow (as compared with state growth rates) to extremely fast. There is no evidence from the four control MOAs that Air Force sonic boom activity significantly

ROTHMAN: EXHIBIT 'L'

CHAPTER VI SUMMARY OF FINDINGS IN THE FOUR ACTIVE MOA'S

1.0 POPULATION

Each of the counties under analysis in the White Sands, Sells, Gladden, and Desert supersonic military operations areas has had a net gain in the number of residents since 1960, as well as since 1970. Rates of growth vary from year to year, sometimes being negative for short periods, and on the whole range from relatively slow (as compared with state growth rates) to extremely fast. There is no evidence that Air Force sonic boom activity has influenced population changes.

2.0 EMPLOYMENT

The number of employed people in the seven counties studied rose at a quicker pace than population. This coincided with similar increases in the civilian labor force, indicating greater proportions of the population have entered the labor force since 1970. Unemployment rates were generally the same in 1979 as in 1970; those rates in the MOAs and nationally rose gretly until 1975, returning to previous levels in 1978 and 1979. There is no evidence that Air Force sonic boom activity has any significant impact on employment and labor force growth in the study areas.

3.0 PERSONAL INCOME

Both total and per capita personal income rose very strongly in the counties of the four MOAs between 1970 and 1977. Income growth outpaced inflationary price increases, indicating net improvements in the general standards of living of residents in the seven counties. There is no evidence that sonic boom activity is responsible for causing losses of personal income, or causing slow growth which would have resulted in negative net improvements.

4.0 RETAIL TRADE

As an indicator of economic health, retail sales grew rapidly in the study areas between 1963 and 1977, responding to increases in income. Sales have generally kept well ahead of price changes, indicating no net losses to the retailing industry. There is no evidence that sonic boom activity has a significant impact on the ability of this portion of the economy to expand.

5.0 ASSESSED VALUATION

The assessed value of taxable property has increased very strongly in three of the four MOAs (suggesting net improvements in tax base), but has not kept pace with inflationary pressures in the White Sands counties. This may be the result of lesser development activity than in other areas, but indications

ROTHMAN: EXHIBIT 'M'

3.1 FIELD VISIT REPRESENTATIVE

The field visit to Gladden Military Operations Area in Arizona was conducted between March 3-7, 1980, to interview selected residents, business people, and public officials as well as to obtain first hand knowledge of the MOA. The individual responsible for visiting Gladden was Ms. Kimberly A. Zveitel of Team Four. (See Appendix B)

3.2 INTERVIEWS

Interviews were conducted with selected individuals at the state, regional and local level who either possessed data relevant to the economy of Maricopa, Mohave and Yavapai Counties or lived in one of the three counties and had day-to-day familiarity with various aspects of life and business there. A general consensus of those people interviewed in the MOA during the week of March 3-7, 1980 is that the sonic booms are not responsible for changes in economic trends.

The average number of sonic booms heard weekly ranged from one or less to approximately ten (twice a day). Persons in Gladden, Salome and Aguila seem to hear the greatest number of booms, two to three per day as maximum. These towns are sparsely populated, with each having under 100 persons, and Gladden estimated to be 10 people. Interviews with persons in communities throughout the MOA revealed no comments which related sonic booms to economic effects. Some people regarded the booms as a nuisance, yet many of these recognized them as a needed part of the Air Force's training. Some had become accustomed to the booms and accepted them as part of the environment with no effects on the economy.

The opening of Interstate 10 north of Wickenburg about five years ago has played a major role in that town's economy, causing changes in some stores and a re-evaluation of Wickenburg's future. Nevertheless, land values are increasing, City services, shops and medical services are readily available, and Wickenburg's nickname of "Dude Ranch Capitol of the World" is not in jeopardy. A prediction that Wickenburg would become a ghost town did not come true. The new highway also caused reduced business activity in the small towns along Highway 60/89 including the unincorporated communities of Salome, Aguila, and Wenden with some motels and service stations closing because of retail curtailment. A point was made that sonic booms were not the reason for these business changes, but the opening of I-10 was.

ROTHMAN: EXHIBIT 'N'

TABLE G-1 POPULATION, 1960 - 1978
MARICOPA COUNTY AND TOWN OF WICKENBURG, ARIZONA

	STATE OF ARIZONA		MARICOPA COUNTY		
Year	Population	Percentage Avg. Annual Growth Rate	Population	Percent of State	Percentage Avg. Annual Growth Rate
1978	2,354,000		1,293,200	54.9	
		2.1			2.6
1977	2,305,000		1,260,400	54.7	
		2.5			3.0
1976	2,249,130		1,224,094	54.4	
		1.1			0.2
1975	2,225,077		1,221,414	54.9	
		3.4			3.6
1973	2,083,161		1,140,257	54.7	
		5.9			6.0
1970	1,770,900		967,522	54.6	
		1.7			3.7
1966	1,609,000		842,522	52.3	
		3.9			4.5
1960	1,302,161		663,510	50.9	

N/A: Data Not Available

SOURCE: U.S. Department of Commerce, Bureau of the Census.
See Bibliographic References AZ-35 through AZ-38.

Maricopa, Mohave, and Yavapai Counties were used to analyze the economy of the Gladden MOA.

Prepared Statement of:

W.G. Askew
Wilma Askew
Box 146
Glenwood, New Mexico

Cheryl Allsup
Lonnie Allsup
Shelly Frost
Star Route
Glenwood, New Mexico 88039

2

Oct. 18th 1983
Box 146
Glenwood
New Mexico

Gentleman:

We, my wife and I, regret we can not attend this meeting in person.

However we wish to voice our disapproval of the Supersonic flight operations over Reserve and surrounding areas

After reading comments submitted by Richard Bargen M.D. we are convinced that every page of R.D.E.I.S deserves correction.

In other words the R.D.E.I.S is close to a farce.

Sincerely
W.G. Askew
Velma T. Askew

We, as stockholders on Hruy Creek Ranch do not want the Air Force to do their tests in Catron County because we feel it will have damaging effects on our livestock and wildlife as well as our own personal health.

Sincerely,
Cheryl Allsup -
vice-president
Tonnie Allsup
Shelly Frost
Duane Frost

Star Route Glenwood NM 88039

Prepared Statement of:

Jon Thorn
Quemado, New Mexico

~~4~~ 3

Sirs,

These comments will be written from a wheelchair confinement and the great amount of running needed to help keep one from traveling. Many of the objections to the proposed training flights have widely spread several outright lies which I think must be pointed out.

Due to that these flights will scatter animals I have spent many years in the outdoors, both as a hobby either, and can positively say that this is not so. Anyone who has ever known anything about animals knows different. The modern day dude cub scout looks for many excuses for his inadequacy but seldom will he honestly admit to a little thing like not enough time. Compliments to the [illegible] for their great thing team.

Groups have claimed that the doves would run all the wildlife out of the country. There are no half-truths. They are either correct or wrong. That claim is a lie. I have spent most of my life outdoors and since time with animals. Only the near physical presence of man will make wildlife leave and even then they won't go far. Neither hunting seasons are much disturbed and there are many mountain lions near the map shows. I have watched lots of animals (especially deer) when there have been sonic booms and other than a start or quick look around they seem unaffected. Deer in fact seem to notice. I have heard claims of snakes being upset but this is a big one lie. I have on a time or two seen rattlesnakes in watching deer (mostly in grazing) deliberately killed by rattlesnakes. Deer are tick. Sonic booms do not seem to bother them by briefly interrupting their grazing and for a quick look around. I have read and heard reports by so called experts which claim one thing or another. These people may know the techniques and gratuitous hop but

they sure don't know it's going [illegible]
flight triggered by a sonic boom - by either someone or
with ANIMAL - probably steers from nervousness or
human presence or misbehaving. That animal
have us packing for an exercise to run
people (even some we call themselves cowboys)
the weirdest animal behavior when
and everything from planes to [illegible]

Finally, some have really voiced
[illegible] of others upon both MAD and myself, I
a high [illegible] and near shut-in meeting frequent nursing
care. This paralysis was caused mostly by stress. The
was brought on by the alibis and excuses offered
by an Elbit Reserve resident. That man
driving record and did continue to be quite a
[illegible] of the work of our group. A very
from Reserve ribbed and pardoned and even
to waive non-punishment - even tho he was
Murder. Any concerns (complaints) about
[illegible] meetings coming from this
at not all. There is neither real
I am proof that their gripes are to be

[illegible] has long been
where nobody will bother you and
and A-bars & these bright decorations
[illegible] gripes would be welcomed
[illegible] cause for great dismay - the
[illegible] in the county would be found! (Keep
[illegible] and we don't want
[illegible] this proposal
[illegible] would be welcomed
[illegible] be heard if the plans included
[illegible] propaganda leaflets. I have been taught
[illegible] hearings - that we should follow the

mainland China on their hot holiday all their problems" Any nation which fines heavily its citizens for having more than one child per couple still has some problems. How would you like that much governmental regulation of your family life (or your daily life?) Consider the source. Is it any surprise or fact-finding that boaters who don't even like the very country giving them life's

I was raised on a lock (Tenn. Tom Bigbee Waterway) from Columbus. Our house was apparently a landmark used by pilots in the early flights. As they commenced them. We kept a flag flying next to. Many times those pilots tipped their wing or did a knife roll or flew a circle to come by again. They just as quite a few would fly upside down in salute to that flag. As long as they had the red, white and blue on them they were welcome. They could have had the hammer and sickle on their tail and been shooting at that flag instead of saluting it. Then we would have had something to worry about.

Some Americans have given a lot and we can all give a little. Many flights are no doubt needless and you can help by stopping your waste but I know the flights over North Viet Nam couldn't have been made without training (so does the communist in Russia and Castro country).

Sonic booms startle man (like a slammed door does) much more than any animal and I used to cuss those noisy planes hoping they crash before they get home. I cussed them until my employer told me having, Afraid to move and protected only on the back of a yellow American, while bleeding and fighting fresh beds of blood soaked by two Chinese (that is right-Chinese) between me. American sounding sonic boom would have been like music to him. Since he told me of his getting riot up they have wounded me to me, too.

I hope they are friendly!

We all wish for utopia
but it AIN'T here yet.

Don Thorn
Columbus, Ky.

Some more thoughts

Some people complain about people being [illegible] in Alaska. It looks like the hippies and yuppies and [illegible] land thus already more of their ilk in.

Most mountain lions, coyotes and eagles have yet to go to a theater to see a Disney movie about the way things should be so we don't get live in a pure utopia. We may all wish to the contrary but the facts remain. Mountain lions even eat man occasionally (a major kill about weekly - deer or cattle for horses) coyotes do eat calves and many deer and eagles can and do kill other animals even as large as mature deer. We may all join with Disney and wish things were different but bears are predators - including Russians. It would be nice if military might (or any defense) wasn't needed but wishful thinking won't turn a flood or the wind or stop a predator.

404 Most real damage to property or structures would be done in a month. Imaginary damage has made the assembly process. Would a test period of a month be feasible? Actual damage can be measured and some fences quoted and the carpenters dirtied. Some will be lying just to hear their own head rattle but they would then have no voice. 404

Prepared Statement of:

Brett Calaway
P.O. Box 824
Reserve New Mexico 87830

Wendy Kent
Box 244
Glenwood, New Mexico 88039

#4

Catron County has always been an ideal place to live and raise a family. Life is slow-paced, quiet, and peaceful. Most people here have no desire for the noise and bustle of city life.

The Air Force wants to ruin our little Garden of Eden. These military people tell us they need the air space over our queit communities for mock war and that it is our Patriotic duty to allow it. They say that the sonic booms will not be bad and expect us to believe them. The Air Force must think that since we have a slow-paced life style we are also slow-minded.

The Air Force has lost even more credibility by publishing the DEIS on the Reserve Military Operations Area. It is full of misrepresentations, and completely ignores the effects of sonic booms on the health of human beings. If the Air Force would be more truthful and cover all the facts, then the people of Catron County could make a knowledgeable decision based on the DEIS. However, since the DEIS is not accurate and truthful we must depend on others to give us the facts.

We are very fortunate to have residents in our county

that are capable of analzing the DEIS for the Reserve Military Operations Area and coming up with all the fallacies contained in the report.

I know these men and women and believe their information is more accurate than what the Air Force has given us.

In conclusion, we of Catron County do not want to be bombarded with continual sonic booms. Besides damaging our homes and our health, the continuous booming will irreversibly damage our lifestyle. We must fight this insideous plot and we ask our Congressmen, Senators, and Governor to help us. Beware; the Serpent is trying to enter the Garden of Eden, we must close the gates and keep the evil out!

Prepared Statement of:

Warren J. Shaul
P.O. Box 696
Silver City, New Mexico 88062

#5

P. O. Box 696
Silver City, NM 88062
October 17, 1983

HQ TAC/DEEV
Attn: Mr. Alton Chavis
Langley AFB, Virginia 23665

Dear Mr. Chavis,

I have reviewed the draft EIS for supersonic flight operations in the Reserve MOA. I am impressed by what is known about effects of sonic booms, but concerned about what is not known, specifically the effects on the health of animals and people living in the immediate area.

Wild animals, in general, are having a difficult time coping with encroaching humans and human caused pollution of various kinds all over the United States and the world. The area impacted in the Reserve MOA is an area that is still remote and relatively free of human encroachment compared to other areas in the United States. In addition, it is an area rich in wild animals, in numbers of species, if not numbers of individuals. The impact of sonic booms on individual species is not known. The area affected has had few studies concerning the endemic species. I think it prudent to at least have some basic information on the animals in the Reserve MOA before it is disturbed and the information irretrievably lost. Some estimates of numbers of breeding individuals, success rates of breeding, behavior of nesting birds, location of nests or breeding and brooding areas, areas important for feeding, and other information should be gathered. This information isn't necessary for all species, but at least for endangered, threatened, and most aparent species. Until these studies are completed, the "sorties" should be restricted to the Valentine MOA in Texas, where sonic booms have been occuring for some time. During this study period, concurrent studies should be conducted

in the Valentine MOA to determine effects of the booms on wild animals. In this way, if future needs demand, the effect of sonic booms to wild animals in the Reserve MOA will be more apparent and we can make a rational decision on the sacrifices we feel worth making at that time.

I do not live in the area of the Reserve MOA. However, I am sympathetic to the desires of residents to keep their area as it was when they moved there or were born there, although many of their motives are probably selfish. I don't believe enough information is available on the effects of sonic booms on people. The Valentine MOA seems like an ideal area to study the effects, especially since fewer people are impacted. It may be that sonic booms and people are incompatable and oceans or vast areas of uninhabited desert will be used for "sorties".

Thank you for considering my comments in making your decision on the Reserve MOA. Please let me know the outcome of your decision. I have enclosed a self addressed envelope.

Sincerely,

Warren J. Shaul

cc:
U.S. Senator Jeff Bingaman
U.S. Senator Pete Domenici
U.S. Representative Joe Skeen

Prepared Statement of:

Cecil Howard
Rt. 10, Box 540
Glenwood, New Mexico 88039

#6

Headquarters
Tactical Air Command/DEEV
Langley AFB, VA 23665

October 18, 1983

Dear Sirs:

Potentially as one of the six people in Catron County whom the Air Force estimates may be "highly annoyed" by the proposed supersonic training flights over this area, I must say that I am already highly annoyed by the RDEIS' apparent total disregard for logic and reason. The Air Force arguments in favor of the flights which were thoroughly defeated before by learned statements have been reintroduced with flimsy disguise and misinformation.

My family and I have invested twelve years of personal resources in developing and maintaining a home and environment in Pleasanton although my teaching position is with the university in Silver City nearly sixty miles away. I commute to work so that we can live here in or near an area that until now has remained relatively unthreatened by the wholesale distruction so common in our unthinking world of today.

For the very reason that our beautiful county is special it is also sparcely settled; thereby making it a target for Air Force "games". Picasso's "Guernica" is a lasting reminder of the suffering caused when the powers forget that small and remote places are inhabited by other human beings like themselves.

Our farm, purchased in 1971, still has the original log cabin built in 1870 which shows the long term occupancy of our site and the particular qualities attracting man to settle here. As the current residents, we can't believe that our lives would remain undisturbed nor that our property values would not change if the flights are accepted.

Speaking for ourselves, our immediate friends and neighbors and all the other "real" people, including the 60,000 annual visitors, who would all be directly affected, we ask the Air Force to select one of the reasonable alternatives.

Sincerely,

Cecil Howard

Cecil Howard
Rt. 10, Box 540
Glenwood, NM 88039

Prepared Statement of:

Janey Thompson
Box 7 Glenwood, New Mexico 88039

#7

U.S. Air Force October 20, 1983

Gentlemen,

It seems to me that the air force has outgrown the capacity of Holloman Air Force Base - that it would be cheaper to train the pilots who would be training for supersonic flights of 300 sorties over the Reserve area to transfer these pilots to Pacific area Bases - than to reimburse all the citizens whose homes would be damaged by these sonic booms - One sonic boom on Monday, Oct. 17, 1983 shook our house & startled my husband out of sound sleep which is most detrimental since he has a heart condition - Many of us have come to this area because of it's quiet & beauty - These sonic booms would make our property unsalable - Is the Air Force, therefore, going to reimburse us for our property?

405

405

Sincerely,
Janey Thompson
Box 7, Glenwood N.M. 88039

Prepared Statement of:

Ben H. Thompson
P.O. Box 7
Glenwood, New Mexico 88039

#8

Prepared Statement Concerning Proposed Supersonic Flight Operations in the Reserve Military Operations Area

Mr. Chairman:

I am Ben M. Thomson, a retired assistant director of the National Park Service, living in Glenwood some ten miles south of the proposed supersonic flight operations area.

The Reserve Military Operations Area is situated in an unusually scenic, picturesque region, much of which is of national park quality. It is relatively unspoiled, peaceful and quiet. Most of the people living here came here because they want to live in this kind of environment. Many retired people have chosen this region for their homes, as my wife and I have.

We are dismayed by the proposal to use a large part of the Reserve MOA as a supersonic combat training area, with the inevitable impact of many supersonic booms daily for the indefinite future.

Your Reserve and Valentine MOA reports state frankly that by far the major percentage of claims against the Air Force for supersonic boom damage is for broken and cracked glass. That fact, alone, is proof of the noise, annoyance, inconvenience and expense imposed upon people forced to live in a supersonic boom area.

I appreciate the need for full and adequate training of Air Force pilots for aerial combat.

In view of the outstanding character of this region and the sacrifices that we and future residents and visitors here would have to make under a daily supersonic combat training program, I submit that it is incumbent upon the Air Force to make absolutely sure that its pilot training program cannot be properly carried out unless it has the proposed use of this area.

October 2?, 1983

Ruidoso, N.M. 88345

AF

RESPONSES

TO

PUBLIC COMMENTS

1: The Air Force appreciates the concern EPA expresses about additional mitigation for sonic boom impacts in the Reserve MOA. Paragraphs 4.2.1.2 and 3 of the RDEIS addressed the use of inflight refueling and temporarily relocating units to satellite locations for over-water supersonic flight and concluded these were not feasible alternatives. The 49 TFW mission includes maintenance proficiency in quick relaunching of aircraft. It is emphasized that the Wing's sorties are designed and planned to fly 1.3 hours, then relaunch successive sorties rapidly. A sortie flown to the Sells MOA would require about twice the time allotted. Tanker support for air refueling is not always or immediately available. Four months advance planning for dedicated tanker support is normally required; whereas, notice of WSMR nonavailability sometimes occurs on the day the mission is scheduled. Additionally, the Sells MOA and its inhabitants currently experience more sonic booms than projected for the Reserve MOA.

2: Paragraph 3.2.3.2 of the RDEIS stated the wildlife species found in the Gila National Forest was shown in Appendix G. The Air Force apologizes for inadvertently not including the wildlife species list. It is included in this document as a continuation to Appendix C. The Air Force does recognize the concern for wildlife species in the area. While there may not be an abundance of published literature on long-term effects of sonic booms to animals and wildlife, one must not overlook the experiences of 25+ years of supersonic operations on the Luke and Nellis AF Ranges, both of which contain National Wildlife Refuges (NWR). The Luke AF Range provides habitat for a wide range of animal and wildlife species including desert bighorn sheep, sonoran pronghorn antelope, javelina, gambel's quail and white-winged doves. The range lies within the path of many migrating birds, that are common visitors mid-February to early June and again in the fall. During the summer, gatherings of white-winged doves at waterholes provide one of the desert's ornithological spectacles. The southern bald eagle, peregrine falcon and sonoran pronghorn, all on the Federal Endangered Species List, are known to be in the area. FWS comments in 1980 concluding Section 7 Endangered Species coordination stated that continued Air Force activities on the Luke AF Range appear to be in the best interest of the sonoran pronghorn. The same conclusion has been highlighted in an article entitled "Planes and Pronghorns Share Vast Luke Range", by Dr. Jack Utler and et al., published in the Arizona Land and People: Magazine of the College of Agriculture, University of Arizona, Volume 34, Number 4, December 1983. A similar situation exists on the Nellis AF Range where bighorn sheep, horses, burros, mountain lion, elk, mule deer, antelope and a host of other animal and wildlife species, including migrating waterfowl and wading birds thrive. The northern portion of the range complex was fenced in the mid 1970s to stop trespass cattle grazing. Since that time the number of horses has increased beyond the land's carrying capacity and now pose a management problem in population dynamics. After all these years of supersonic flight, BLM continues to receive requests for cattle grazing allotments in the Desert MOA. Collectively, from what has been published and found in actual field experience, sonic booms of

the magnitude anticipated do not appear to pose a significant effect to wildlife or domestic animals.

The Air Force has given consideration to recreation in the area and stated in the RDEIS that sonic booms may be an irritant to the outdoor recreationist. It is not believed that the proposal would have a significant impact on the recreational opportunities in the area. The RDEIS shows supersonic operations will not be spread throughout the MOA and also indicates activities outside the MOA should not be impacted. It is noted that the area has been infrequently exposed to sonic booms of similar intensity for some years now and no documentation was found during preparation of the Economic Impact Study to suggest any indication of a significant effect. Should the proposal be adopted, the Air Force will work with the Forest Service to achieve minimum effect on any future identified recreational site within the MOA.

The first sentence of paragraph of 3.2.3.5 of the RDEIS identifies the known cultural resources in the MOA. As stated, they should not be significantly affected. In addition to the Pueblo Indian ruins (cliff dwellings, caves, sacred springs and shrines) in the San Francisco and Tularosa River valleys, petroglyphs may be found throughout Catron County. It is possible there are some limited number of cliff houses as well as petroglyphs in the maneuvering area. The study reported in Appendix I of the RDEIS shows petroglyphs and rock shelters should not be effected. Sonic boom effects on exposed rock shelter cliff dwelling walls depends upon the boom's impulse loading characteristics and characteristics of the material. The RDEIS has stated that carpet booms appear to pose more of a threat to structures than focus booms, both from a spatial probability and impulse characteristics. Calculation of allowable bending forces on an adobe wall show they should be able to withstand overpressures greater than about 12 psf. The probability of a carpet boom of this strength occurring anywhere within the MOA is beyond statistical significance. The Air Force does not believe anticipated boom overpressures would result in an effect as defined in 36 CFR 800.3 (Criteria of Effect and Adverse Affect). However, should future information indicate a possible effect determination, the Air Force will work with the New Mexico State Historic Preservation Officer (SHPO) to develop a monitoring and/or mitigation program. The Air Force will maintain an open dialogue with the SHPO on cultural resources within the MOA.

3: See first paragraph of response #2.

4: See first paragraph of response #2.

5: Discussion provided on page 10-20 of the the RDEIS is considered adequate because the ground shock wave is the force of primary concern; however, air wave propagation down the well is interesting from an academic standpoint. Focusing and reflection would be within a few pipe or casing diameters of the surface; beyond that point the N-wave would quickly decay to a sine wave. The maximum effect at the air/water interface is to cause a reflection that would double the boom pressure. For a focus boom of 26 psf, the effect is that of increasing

the water level standing in the well by five inches. (This assumes no attenuation of the sound waves propagating down the casing.)

6: The initial draft EIS was filed in July 1979 and was prepared to meet the CEQ guidelines then in effect. For continuity, the Air Force has elected to continue processing this proposal's EIS under the original format. While there are minor differences in the format and technical requirements, the EIS does an adequate job of evaluating the environmental effect of the proposed action and alternatives and does provide the decision maker a basis for a sound, reasoned choice. A list of preparers is provided in this document.

7: See third paragraph of response #2.

8: The Air Force appreciates the concern expressed by Governor Toney Anaya. It is emphasized that the difficulty of having definite knowledge is the problem of proving a negative. No one can ever prove that noise does not have an effect on the health of people, but even effects do not necessarily result in cumulative clinical pathology. Based on the collective knowledge and consensus of the scientific community, the Air Force believes the level of overpressures to be experienced at intermittent intervals are neither sufficiently intense nor frequent enough to be considered a significant impact from a health standpoint. This subject is also discussed in the accompanying summary.

9: The research design for the Economic Impact Study indicated that data on ranching, farming, and mining in the four control MOA's would not be analyzed because such activities were not of sufficient importance therein in order to assess potential impacts in the proposed supersonic MOA's - Reserve and Valentine. Data on these attributes in the proposed supersonic MOA's were collected. The analysis concluded that ranching, farming and mining operations in the Reserve MOA would not be significantly impacted. Also see paragraph 3.2.4.3 of the RDEIS.

10: All supersonic flights in the Reserve MOA will be conducted above 15,000 ft MSL. Civilian aircraft are aware of this published area. There will be minimum overlap between VFR civilian traffic below FL180 and F-15's above 15,000 ft. In the WSMR area, F-15's presently fly above AT-38's daily at supersonic speeds with no problems. The F-15 has an excellent on board radar that can pick up airborne traffic and avoid it. In addition, an integral part of the training for our combat crews includes visual lookout and acquisition of aircraft. Both military and FAA radars further enhance area control and give warning of potential traffic conflicts.

11: Air Force research into the spatial effect of the proposed action indicates activities outside the MOA should not be impacted. The location of the operational ellipse has been suggested based on such parameters as communities, wildlife species of concern, as well as recreational activities. This type of planning is in consonance with the federal policy of multiple use and sustained yield. It is recognized that sonic booms may be an irritant to the outdoor

recreationist, but the effect would be to individuals within a defined area and away from the major recreation attractants. Past experience in other MOA's indicate this limited effect is not significant on recreational opportunities and should not significantly impact the recreation industry in the area.

12: Various alternatives to proposed supersonic operations in the Reserve area have been investigated such as: 1) Utilizing existing MOA's within 150 nm of Holloman AFB; 2) Utilizing existing supersonic airspace outside of 150 nm of Holloman by air refueling or temporarily deploying aircraft to another base; and 3) Creating a new MOA capable of handling supersonic operations within 150 nm of Holloman AFB. Mission requirements, cost to taxpayers, nonavailability of suitable alternate areas and potential sonic boom effects were all considered. While WSMR is and will continue to be the primary supersonic training area, it will still be necessary to fly some portion of these type flights in other areas. The Reserve area was determined to be one of the two most viable alternatives based on the above considerations. Proposal to use the Reserve area is based on the number of sorties required to be flown by F-15's at Holloman, and WSMR utilization by higher priority agencies. It should be noted that the Air Force has been able to increase its projected utilization of WSMR to at least 600 sorties/month, rather than the 400 sorties estimated in the original DEIS.

13: The proposed action would not result in an increase of secondary jobs. The Air Force does not foresee any immediate loss of military or civilian jobs should the no action alternative be selected. From a long term position, the Air Force could be forced to review mission requirements against the capability provided by the base and associated airspace to determine if a mission realignment is required. This evaluation would require an environmental analysis before the Air Force could make a decision. The aspects of a mission realignment is beyond the scope of this decision proposal and consequently, has not been evaluated in this EIS.

14: See response #8.

15: The background noise in much of the survey areas is quite low. Where a sound exceeds the background levels by 10 to 15 decibels, background noise does not affect people's judgement of the noise. This would be true at Reserve as well as Oklahoma City. The Oklahoma City study involved urban, suburban and rural subgroups. Extrapolated data from the study is considered valid for calculating expected annoyance in advance.

16: See second paragraph of response #2 and response #11.

17: As stated in several public comment letters, sonic booms are not a new source of sound for the area. This proposal would increase the relative frequency of this sound in a defined area. The location was proposed to help limit the effect on people and on recreational activities. Also see response #8.

18: See response #12. The Air Force appreciates the concern expressed in this comment and understands the need for validating the predictive model. To this extent, the Air Force is researching state-of-the-art monitoring equipment with intentions of having a stand-alone prototype built. If this prototype proves acceptable, the Air Force will then consider purchase of the equipment. For a complete model validation, the equipment would need to be located within an area that is instrumented with the capability of providing complete aircraft flight geometry (such as Air Combat Maneuvering Instrumentation). This instrumentation is not available in the Reserve MOA. From an environmental perspective, the Air Force does not believe a test period is needed. The Oceana model was designed to be conservative in overpressure and noise level predictions and does support conclusions from field investigations on the number of booms a person is projected to hear. It should be noted the area already experiences sonic booms from high altitude supersonic aircraft flights (not associated with this proposed activity or the MOA) without any known significant environmental effects. In addition, NEPA imposes a continuing responsibility on the agency taking the action even after the final EIS is filed. Significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts may arise after filing or during execution. If this should occur, the Air Force would be required to conduct a supplemental environmental analysis of the significant new information or impacts.

19: The use of average sound level is the preferred method for quantifying human response to sonic boom exposures. It is recommended by CHABA and has been adopted by pertinent federal agencies as stated in the RDEIS, which also addresses sonic boom impacts in terms of events per day and anticipated overpressure levels.

20: The differences in elevation between Valentine and Reserve are not important factors in sonic boom attenuation because the relative distance between airplane and ground are considered similar. Population data for the Reserve and Valentine MOA's indicate approximately twice as many people in the Valentine MOA live within the proposed operational ellipse as in the Reserve MOA. The significant difference in long term noise exposures between the two MOA's is due to projecting use of two operational areas in Valentine versus one in Reserve.

21: See response #18.

22: See second paragraph of response #2 and response #11.

23: See third paragraph of response #2.

24: See third paragraph of response #2.

25: The Air Force appreciates the Department of Game and Fish's concurrence that the proposal would not have a significant effect on wildlife. The Air Force believes enough comparable data is contained to show the basis for the position that the proposal would not present a

significant impact to wildlife. Also see first paragraph to response #2.

26: See response #25.

27: See response #25.

28: See second paragraph of response #2 and response #11.

29: The 49 TFW cannot initiate supersonic activity in the Reserve MOA until the National Environmental Policy Act requirements have been completed, a decision made and public notified of the decision..

30: See response #12.

31: See paragraph 3.2.3.2 of the RDEIS and first paragraph of response #2.

32: See response #8. There is no indication that either past or proposed sonic booms have/would cause a significant economic impact. Effects on structures are covered in paragraph 3.2.3.3 of the RDEIS.

33: See second paragraph of response #2 and response #11. The economic study conducted at the other southwest supersonic MOA's was performed in response to comments on the first DEIS.

34: Comment noted. See second paragraph of response #2 and response #11.

35: The Forest Service's September 30, 1983 letter indicates concurrence that the 15,000 MSL minimum elevation would adequately minimize impact with firefighting operations. The Gila Wilderness area is south of the lower boundary for the Reserve MOA and no supersonic flight will be authorized outside the MOA.

The F-15 is equipped with highly sophisticated airborne navigation equipment designed to let the pilot know his position at all times. It also has an advanced onboard radar system that allows long range detection and avoidance of other airborne traffic. In addition, supersonic flight operations are conducted with two or more aircraft, each monitoring altitude and position of the formation during training activity and picking up other aircraft visually. We feel the potential for disaster is low, and this is borne out by the fact that only one Holloman F-15 has been lost in the last four years. Also see response #10.

36: The Catron County Commission has been provided a copy of the Economic Impact Study prepared by Team Four and has provided comments for consideration in the EIS. See the Catron County Commissioner's comments.

37: During the preparation of the EIS, the Air Force has identified data gaps and where possible, has conducted necessary studies and analyses to evaluate the potential impacts. The Air Force believes the EIS is adequate and meets the intent of the NEPA.

38: See response #6. The Tactical Air Command's Environmental Planning Division does not maintain a file of all reference sources used in preparing environmental impact statements. Since most articles are protected by copyright laws, EIS team members either use their own personal copy or conduct the basic research at local libraries and utilize the services of inter-library loan agreements. The Air Force has cooperated in good faith by providing Air Force generated or funded reports and giving adequate reference information so that the data can be located within the library system.

39: A generic EIS is allowed under regulations implementing the National Environmental Policy Act (NEPA), but it is not a required procedure. Although the other proposals have similar timing, the impacts are not cumulative, nor are the proposals connected actions (where one is interrelated or dependent upon another). In addition, the Air Force has seen no compelling purpose in a generic EIS. The EIS on "Supersonic Flight Operations in the Reserve MOA" places the potential impacts in a specific context, analyzing both those factors which are common to such supersonic flights and those factors which are unique to the individual locale. A generic EIS, on the other hand, would be a generalized discussion of supersonic impacts, based upon the same scientific analysis and data base, but without the benefit of analyzing such impacts in a concrete situation.

40: a. Yes.
b. No.
c. No.
d. Yes.

41: Waivers from the requirements of AFR 55-34 have been granted within the last ten years. However, some of the specific information requested is difficult to obtain, such as for waivers granted for brief periods (e.g. short duration training exercises). The Air Force is now searching for such information in response to a Freedom of Information Act request from this commenter. Waivers are presently in effect for all or portions of the following MOA's and/or restricted areas: Eglin, Eglin AFB, FL; Desert, Nellis AFB, NV; Sells and Gladden, Luke AFB, AZ; Twenty-nine Palms and Panamint Valley, George AFB, CA; Edwards, Edwards AFB, CA; White Sands Missile Range, Holloman AFB, NM; Stoney, Yukon and Susitna, Elmendorf AFB, AK; Hill/Wendover/Dougway, Hill AFB, UT; and Red/White, Kunsan AB, Korea. Waiver requests are pending for Lake, Elmendorf AFB, AK; Reserve and Valentine, Holloman AFB, NM; and Gandy, Hill AFB, UT.

42: Flying utilization rate is based on three squadrons of 24 Primary Aircraft Authorized (PAA) for a total of 72 chargeable F-15's.

43: There were 72 PAA during each year indicated.

44: a. AFM 51-50 directs required training. However, the 1200 sortie number was obtained by assuming approximately 85% of the programmed training sorties would be supersonic.

b. There is no document which specifically states to what degree that

the Army's on-going mission limits use of the WSMR airspace by the 49th TFW. Availability of this airspace is restricted by national defense priorities which in many cases can be forecast but is always subject to short notice, high priority test programs. Past experience of testing systems and amount of time range airspace was closed to AF, on-going programs that currently limit the airspace, and forecast of drawing board projects which will require range testing were all used by WSMR officials to predict how much long term use the AF could expect. This was translated into an estimate of 600 sorties per month representing a worst case time period during which WSMR is in full use and all three squadrons of 49th TFW are on station. This does not mean maximum use of Valentine and Reserve MOA's on a routine basis. However, the EIS must consider minimum use of WSMR resulting in maximum sorties projected elsewhere. There is no document to verify this assessment. Also see responses #54 and 366.

45: The Army is the manager for WSMR operations. There are programs there which involve every branch of the Department of Defense. These programs had priority over the 49th TFW operations at the time the beddown decision was made and they continue to have priority now. F-15 sortie generation capability and unforeseen requirements for WSMR have made WSMR area time insufficient to meet the needs for supersonic training necessary for 49th TFW pilots.

46: Flying utilization rate is based on 120 PAA AT-38's.

47: 1978 - 118*
1979 - 118*
1980 - 120*
1981 - 120*
1982 - 120 PAA
1983 - 120 PAA

* numbers are based on sortie rate flown during those periods.

48: 1978 - 108
1979 - 137
1980 - 133
1981 - 133
1982 - 138
1983 - 140

49: There is no projected increase of AT-38's or F-15's at Holloman.

50: On an average, 34 AT-38 sorties require use of a gunnery range daily.

51: The AT-38's average 34 sorties daily in the WSMR airspace. These sorties are conducted simultaneously with F-15 training as they normally remain below 15,000 ft MSL on the gunnery ranges while the F-15's operate above 17,000 ft MSL. The Talon and Beak MOA's average 56 and 70 daily sorties, respectively. AT-38's flew 52 sorties at McGregor range in FY 1983.

52: The 162 Tactical Fighter Training Group, Tucson, Arizona manages the Reserve MOA. Aircraft other than F-15's currently use the area; the supersonic proposal would not prohibit their continued use.

53: TACM 51-50--MAJCOM/unit training programs are designed to achieve the highest degrees of combat capability with available resources, consistent with flying safety. Training is expressed in effective, combat training oriented, flying sorties, along with the appropriate weapons qualifications and flying events. The TAC goal has been 15 sorties per month, per pilot. We have reached that goal now and will remain there.

54: It is possible that increased activity on WSMR could further limit 49th TFW use of the range. However, use of Reserve is proposed to be limited to 300 sorties as described in the EIS. The subject of continued support of the 49 TFW mission at WSMR was discussed in February 1984 between Senator Bingaman and Major General Fulwyler, Commander of WSMR. The conclusion of that discussion supports the Air Force's analysis that WSMR may be able to continue providing time for about 600 sorties per month. There would be times when less than this could be supported and times when more than 600 per month could be accommodated. To help put this issue in context, one must also remember that the 49 TFW has commitments to support other DOD activities which may require temporary deployment of aircraft. During this period, the monthly sortie requirement would be less than the 1200 per month described in the RDEIS.

55: There is no formal written agreement between the 49 TFW and 479 TTW concerning priority of WSMR airspace. It is a matter of scheduling activities so that Wings achieve needed training. Both Wings have worked the scheduling issue and also established altitude limitations to achieve maximum deconfliction of their activities. As a result of these actions, there is very little interference between the two missions in the WSMR airspace. The primary conflict to obtaining needed sorties is the ongoing WSMR testing program.

56: See response #55 above.

57: The Air Force believes that its treatment of alternatives is adequate. Identification of an agency's preferred alternative is one of the format changes that occurred when CEQ's regulation (40 CFR 1500) replaced their guidelines. See response #6. The proposed action identified in the RDEIS is the Air Force's preferred alternative.

58: There may be times when 450 additional sorties per month could be obtained in WSMR airspace; however, for planning purposes, it must be remembered that the sortie projections are based on airspace availability and full complement of aircraft at Holloman AFB. The REIS figure of 120 additional sorties was not based on working a seven day week, but rather using the two weekend days vice two normal weekdays. The 600 sorties per month is based on 30 sorties per day at WSMR for weekdays. If two weekend days are substituted for the weekdays, we projected that an additional 15 sorties (or 45 total)

could be flown each Saturday and Sunday. This would result in an additional 120 sorties per month (8 weekend days X 15 sorties), which must be balanced against the total sorties requirement and the impact on morale and retention suffered by Air Force personnel at Holloman. See paragraph 4.4.2.2 of the RDEIS.

59: There are two wings at Holloman AFB, both of which require support operations. If one wing shifts operations to weekends, support personnel would be required to provide the needed services, resulting in a seven day workweek.

Personnel manning equates to dollars, accounts for over 50% of the AF budget, and is critical in the United States Air Force. In order to set up a seven day operation, the number of people would have to increase drastically; not only base support personnel, but pilots, maintenance personnel and supervisors. Manning levels are approved by Congress and the Air Force must work within the authorized level. In addition, the aircraft cannot be flown continuously on a seven day per week basis. Additionally, aircraft must also be approved by Congress. Periodic inspections, scheduled maintenance and unscheduled repair of inoperative/faulty equipment necessitates down time for the airframes. A major portion of this is done on the weekend.

60: The referenced F-15/T-38 beddown Environmental Assessment states the number of F-15 supersonic events (sorties) would be about 1300 per year, which would average about 108 sorties per month. At that rate there was no question of the White Sands Missile Range's ability to provide the needed support. The requirement now is 14,400 sorties per year (1200 per month) which does surpass the White Sands Missile Range's long term support capability for the 49 TFW.

61: For comparative purposes, the elevation of Valentine, Texas is approximately 4500 feet MSL; the minimum altitude for supersonic flight operations would be about 8,000 to 10,000 feet above ground level. Reserve, New Mexico is about 6,500 feet MSL and the minimum altitude for supersonic operations would be about 8,000 to 9,000 feet above ground level.

62: See response #20.

63: There are no wilderness areas in or near the Valentine MOA. Wilderness areas outside of and south of the Reserve MOA would not be significantly impacted as perhaps implied by this comment. The probability of a sonic boom reaching the Gila Wilderness Area is small. The Aldo Leopold Wilderness Area would not be impacted due to its distance from the MOA. Reference paragraph 3.2.3 of the RDEIS for a discussion on spatial spread of supersonic operations.

64: Requested references are: AF Regulation 55-2, "Airspace Management", and FAA Handbook 7400, "Procedures for Handling Airspace Matters."

65: The Oceana study shows that, on a historical basis, supersonic maneuvering operations were contained in roughly a 170 NM^2 area and as a result of those operations, an area approximately three times larger could be affected by the sonic booms. This does not imply that supersonic flight would be "restricted" to a 12 X 18 NM maneuvering ellipse. A 40 by 50 NM area authorized for supersonic flight is the minimum size of airspace needed for the proposed action. Sonic booms are not expected to be heard outside the MOA.

66: While the Beak, Pecos, Reese 3, and Valentine MOA's meet the airspace size requirements, only Valentine compares favorably with the Reserve MOA in terms of the total evaluation criteria. One must remember that about half of those projected to be impacted in the Reserve MOA are not full-time residents. They are present only during the fire season; and even with this number they are about half that which could be affected in the Valentine MOA.

67: Expanding the Talon MOA by 10 NM on its western side would necessitate moving or deleting a high altitude jet route and a low altitude airway running from Roswell to El Paso. While this is possible, it is not feasible since the Talon MOA is saturated with AT-38 training sorties. The AT-38's require this MOA for daily operations as it accommodates their limited range capability.

68: The population of the Talon MOA is estimated to be between 36,000 to 37,000 people. The Beak MOA's cover the majority of Lincoln County (10,997 population) and primarily all the population centers including the Mescalero Apache Reservation. It is also pointed out that the Beak MOA overlays and is adjacent to the Capitan Mountain and White Mountain Wilderness Areas, respectively.

69: The Albuquerque Sectional Aeronautical Chart is merely designed to depict the entire MOA and warn non-users that military operations throughout the area are in effect. Three years ago Talon was divided into three working areas to get maximum utilization for the AT-38's. The scheduling agency and users of this area are aware of the divisions. How it is divided internally is irrelevant to civilian flying operations.

70: Moving the Talon MOA to the west would require the movement or deletion of a high altitude jet route and a low altitude airway. An additional jet route would have to be deleted, moved or restricted if F-15 operations were to be conducted in this area as it dictates an altitude restriction which precludes effective training.

71: See responses #66, 67 and 70.

72: See response #55. Relocation of the 479 TFW would not result in the 49 TFW's ability to obtain all required supersonic sorties at the WSMR.

73: The 27th Tactical Fighter Wing located at Cannon AFB flies the F-111D,

an air-to-ground fighter bomber. Most of the F-111 flight operations in the Pecos MOA consist of basic aircraft handling maneuvers. Altitudes in the Pecos area are:

Pecos W - 10,500' - FL180
Pecos S - 11,000' - FL180
Pecos E - FL180 - FL230

74: The EIS is in error. Cloudcroft and Mescalero do not lie within the geographic boundaries of the Beak MOA. They are, however, in very close proximity. The errata sheet reflects the change.

75: Yes, it is technically possible to generate sonic booms within the Beak MOA such that the mentioned towns would not be expected to hear booms, but the comment overlooks the other small towns/communities, the Apache Reservation, the Capitan Wilderness Area, and other issues described in the RDEIS that make the MOA not a viable alternative.

76: FAA.

77: FAA Handbooks 7400.2b and 7610.4f.

78: FAA.

79: The runway at the Reserve airport is hard surfaced. This correction is annotated on the errata sheet.

80: The Sells MOA and Nellis AF Range were evaluated in the inflight refueling alternative and shown not to be viable. That discussion showed the Sells MOA to be saturated; thus, there was no need to evaluate any base that is near that MOA. Paragraph 4.2.1.3.2 stated there are a number of Air Force bases in Florida that are near supersonic airspace. Tyndall AFB was chosen as an example. The analysis shows the entire concept of temporary deployment to meet the mission requirement is not viable; thus, there is no need to review all potential bases on an individual basis.

81: See responses #80, 55 and 72.

82: See responses #80, 55 and 72.

83: A cost benefit analysis is not required and was not otherwise prepared as a part of this proposal. There are human and environmental elements that do not lend themselves readily for economic analysis. The Air Force chooses to look at the whole picture.

84: See paragraph 4.1.1.2 of the RDEIS.

85: An accurate air pollution emission inventory nor monitored air quality data are available for establishing pollutant baselines in the Reserve MOA. The Air Force has evaluated the current and projected emissions in respect to the state's attainment status of the National Ambient Air Quality Standards and dispersion characteristics for the area. This

evaluation shows the potential impact would be negligible and there is no need for further elaborate analysis. Table 1 includes emissions from subsonic as well as supersonic flight.

86: The analysis is based on F-15 aircraft. An occasional A-7, F-106, or some other type aircraft may be in the area doing independent training such as low level or working with the 49 TFW. This is the case now and it is expected to continue. The pollutant emissions of occasional users represent a small fraction of that shown in the RDEIS for F-15's. Considering that the MOA is planned to be used for spill-over sorties that could not be flown in WSMR, actual operations may average less than the maximum projected.

87: The air quality analysis for the proposal, supersonic flight, looks at a worst case condition for existing and future operations. It analyzes 3600 annual F-15 sorties at subsonic speeds (which would be the maximum number of sorties expected in the MOA should the proposal not be accepted) and a comparable number of sorties with short durations of supersonic flight for future conditions. Emissions from other aircraft would not result in annual estimates shown in the RDEIS being exceeded because those sorties represent a small fraction of the number of sorties and projected emissions.

88: See response #86 and 87 above.

89: See paragraph 3.1 of the RDEIS.

90: The research design for the Economic Impact Study required analysis of state, county, and local data both in terms of economic statistics and interviews with local officials within the four control MOA's and the Reserve and Valentine MOA's. The contractor recognized the influence large towns and cities several miles from the MOA's have and thus focused attention to towns within the study area to help reduce the metropolitan influence. A major factor in evaluating the four control MOA's was the understanding gained and data collected during the field visits within the study areas. This provided first-hand knowledge for the economist to evaluate the local conditions as compared to state and county statistics. Certainly, subcounty economic data would have made the evaluation process easier and minor changes could have been analyzed for historical purposes; however, subcounty data was not always available so the next tiered step was county and state trends.

91: The Air Force does not have a blanket policy for a minimum ceiling over bald eagle nests. On a case by case basis, the Air Force has agreed to limit flight to no lower than 2,000 feet vertically and one mile horizontally over an active nest during nesting season.

92: Our primary area for supersonic flight is and will continue to be WSMR. When WSMR cannot accommodate the total number of sorties required by the 49th TFW, we propose using Reserve and Valentine to

conduct training. The time spent in transit to Reserve is not wasted; it can be used for systems checks, tactical formation and systems operation practice, all integral parts of air superiority training. Normally, 10 minutes is spent transiting entry corridors to the supersonic areas in WSMR. Ten to fifteen additional minutes would be spent in transit to Reserve or Valentine. This time is not as excessive as that required to go to some distant area such as Sells (with air refueling) and therefore, has less of an impact on total number of sorties flown daily as the aircraft are back on the ground and ready to turn to another mission much more quickly.

Training programs for tactical fighter pilots are designed to achieve the highest degree of combat capability within available resources, consistent with flight safety. This training is expressed in effective, combat training oriented flying sorties, along with the appropriate weapons qualifications and flying events. Numbers of required sorties were derived after much analysis by experts in the tactical aviation arena and are indeed a valid guideline for pilot proficiency.

93: The map scale is incorrect; it is off by a factor of two times too large. This is clarified on the errata sheet.

94: The Air Force appreciates the concern expressed over population figures and has made an honest effort to provide as accurate data as possible. To this extent, the Air Force contacted the Catron County Assessor's Office and the Beaverhead Ranger Station in the latter part of 1980 requesting assistance in identifying populations by location. The Assessor's Office provided estimates for Reserve, Cruzville, Apache Creek and Aragon. Just before printing the RDEIS, the 1980 census was reviewed which showed the Catron County population to be 2720; the Reserve District showed 1692 people and the Quemado District showed 1028 people. The Rand McNally Commercial Atlas and Marketing Guide, 113th.ed., 1982 was reviewed for 1980 census data for towns in the area. This data is as shown in the RDEIS. San Francisco Plaza, Lower San Francisco Plaza, and Cruzville are indicated to be within the Reserve, NM zip code and population figures are thus included in the Reserve figure. The Air Force apologizes for not finding the discrepant figures in Figure 16 of the Valentine RDEIS prior to printing the document. Locating and correcting discrepancies is one of the many benefits federal agencies gain by involving the public in the NEPA process.

95: Figure 17 of the Reserve RDEIS is not in error but is somewhat confusing by listing population in the ellipse along with map key references for locations outside the ellipses. Table 11 shows the total population in the ellipses which provides the basis for analysis of impacts. This is clarified on the errata sheet.

96: The six items discussed on page 4-11 of the RDEIS are not quotes from the F-15/T-38 beddown EA and, in fact, were not intended to be item per

item paraphrases from that document. The Air Force has not changed any criteria. The RDEIS is replete with discussion of criteria and Air Force policy on supersonic flight. The essence of the airspace requirement is unconstrained use and no altitude restrictions. The policy to conduct supersonic activity over water where possible certainly considers the constraints placed upon the airspace by having a large number of people living below the area. Consequently, when airspace over water or uninhabited land is not adequate or available, the Air Force then tries to locate sparsely populated areas that meet the identified criteria of which population is included.

97: See response #60. The F-15/T-38 beddown document described the expectations which existed at the time it was prepared.

98: The commenter misinterprets the quoted reference. The author conjectures that military aircraft will have a continuous succession of high load maneuvers, and thus produce a series of separate focus booms "all along the supersonic flight path." This is not consistent with the observations on ACMI. The cited reference clearly states that the location of a focus boom is directly related to the flight maneuver which would cause it, as stated in the RDEIS.

The commenter's statements on focus boom amplification factors ignores the follow-on discussion in the cited reference that in 85 tests to measure focus booms, the highest value measured was 5, which is totally consistent with statements made in the RDEIS.

The statements regarding atmospheric effects on reduction of focusing effects are based on NASA results of a number of test programs, as summarized by Maglieri in reference 59 to the RDEIS. The quotes from Maglieri related to extreme temperature and wind structure causing deviations of ray paths such as to increase propagation distances to cutoff are accounted for in the Carlson model.

99: Secondary carpet booms are not discussed in the EIS as a potential adverse impact because the disturbances do not have an N-wave character and tend to be very weak in intensity (0.001 to 0.01 psf). They are generally not audible (0.1 to 1.0 Hertz) but they can cause building vibrations which tends to be more of a curiosity than a source of serious community complaint.

100: Comment noted. See paragraph 3.2.3 of the RDEIS which supports the conclusions of the Sells experience.

101: Development and application of the Oceana Model is discussed and reference 94 cited on page 3-4 of the RDEIS. The CDNL calculation procedure in references 94 and 99 are identical.

102: The commenter misinterprets reference 99. The recommendation for research in this reference is to improve on the substantial body of sonic boom knowledge now at hand. This in no way invalidates existing analytical techniques.

103: The commenter correctly states that EPA's "Levels document" concluded that a sonic boom stronger than 0.75 psf would leave the general health and welfare adversely affected. The EPA interpreted "health and welfare" in accordance with the World Health Organization definition as "complete physical, mental and social well-being"...and "includes personal comfort and well-being and the absence of mental anguish and annoyances." It must be remembered that the EPA document is a long range goal and does not address economic and technological feasibility. EPA attempted to equate the effects of residential noise exposures of DNL 55 to sonic boom exposures. The formula derived describes boom exposures at which community annoyance should virtually disappear and is based upon the six month Oklahoma City study (which the commenter has taken a firm stance against). Although the formula provides an estimate of the probable threshold of annoyance, it does not provide any guidance for estimating the magnitude of the annoyance for exposures that exceed this "threshold." The weakness of this part of the EPA Levels document led directly to the request to the National Research Council study which resulted in the CHABA Working Group 84 report (reference 106 of the RDEIS).

104: The sonic boom exposure at Oklahoma City was at least 4 times the exposure to be expected at Reserve. The method of evaluation of the data by the CHABA working group was reviewed and approved not only by the parent CHABA committee but also by an independent review committee of the National Academy of Sciences.

105: The context of the CHABA report was to respond to Air Force questions on: what are the potential hazards; is enough known to establish limits; and what research should be conducted to determine the hazards and establish limits. CHABA's conclusion on the first question is as quoted in the EIS. CHABA's conclusion to the second question gives concern to the quality of data available and states: "Until better information is available, however, it would appear prudent for pregnant women to avoid exposures of long duration (several hours per day) to sounds of 90 db SPL and above, the maximum level currently suggested by the U.S. Department of Labor for unprotected ears." CHABA then makes recommendations for future research as response to the third question. Also see response #44b.

106: See response #92. The number of aircraft sorties scheduled to be flown per month is based on analysis and historical data compiled by experts at major command headquarters who deal solely with gaining maximum efficiency from assigned resources. It is not arbitrary but is derived analytically from data on actual operational readiness status of all F-15's since the aircraft entered the inventory and on demonstrated pilot proficiency.

It has been shown that sorties rather than flying time is the basis for maintaining crews at a combat ready level. It should be understood that while total sorties is a goal, effective combat sorties by specific type, based on the primary wing mission, are the real criteria. Each pilot in the 49th TFW, for example, is required to

accomplish a minimum number of air combat sorties semiannually. These sorties, the majority of which involve supersonic flight, form the basis for the 1200 sortie per month requirement.

An important point: Flying time can be accumulated without gaining any combat training benefit, but an effecive air combat sortie is one on which specific events are accomplished.

107: Supersonic airspace in WSMR north of highway 380 is not over land completely under government control. A considerable portion is private land. The Desert MOA is not under control of the DOD; the MOA is east of the Nellis AF Range and Nevada Test Site and does overlay private lands. Also see response #90.

108: The validity of using Oceana data to model Reserve is based on its representation of F-15 combat maneuvering. The Oceana data are not "one data point", but 56 supersonic events. Discussions with Holloman personnel confirm the nature of the flight operations at Oceana as being the same as used by Holloman. Other observations of ACMI data further confirm that the heights, Mach numbers, and durations of supersonic flight derived from the Oceana data are good representations of F-15 combat maneuvering. The significant issue is the height distribution observed, relative to the minimum altitude permitted, not whether the operations are over water or mountains.

109: This comment is incorrect. It is based on a lack of understanding of the relations between maneuvering altitudes and the minimum height permitted in a MOA. At Oceana this "floor" is 10,000 ft MSL. No events occur below this height. A key assumption in the analyses is the difference in inverse root-mean-square height (RMS) and the floor of the MOA. At Oceana, the RMS height was 15,140 feet. The same type of restriction at Reserve, where the floor is 15,000 ft MSL, places the RMS maneuvering height at 20,140 feet. Since the Mach number distribution is a function of airplane flight mechanics during maneuvering, it does not change. The height distribution expected at Reserve would be achieved by displacing all Oceana events upward by 5,000 feet. The result would be a <u>decrease</u> in number of events whose Mach numbers are below cutoff. This would reduce the number of events where Mach number exceeded cutoff by 40 percent. By assuming the same ratio of propagating booms at Reserve as at Oceana, the Air Force has been extremely conservative, not optimistic as claimed.

110: Results from other ACMI data, such as at Luke and Nellis, show that 0.8 propagating booms per sortie is valid for average range times of 29 minutes, with standard deviation of 9 minutes. Also see response #109.

111: The RDEIS does contain analysis based on overpressures. Consequently, overpressure data reflected in paragraph 3.2.3 of the RDEIS does include the Mach 1.5 supersonic event. From a statistical standpoint, both methods show comparable values; however, overpressure analysis provides a straight-forward approach to answering questions on number of events one could expect to hear and percent of booms expected above a given value.

112: This comment is incorrect. All day-night average sound level criteria, as developed by EPA and used by HUD, DOD, DOT and others, are long-term, preferably annual averages. This is also in accord with American National Standard S3.23-1980, "Sound Level Descriptors for Determination of Compatible Land Use."

113: The Air Force has conducted additional investigation into focus booms since reference 94, "Development of C-Weighted Day-Night Average Sound Level Contours for F-15 Air Combat Maneuvering Areas," was published and chose to provide that data in the RDEIS rather than base the analysis on the estimate provided in the cited reference. See paragraph 3.2.3 of the RDEIS.

114: The analysis of reference 94 is not in error and is not contradicted by reference 99. Pitch angle effects were assumed to average to zero in reference 94. Subsequent analyses of other ACMI data show that the long term average pitch angle for F-15's during flights with speeds in excess of cutoff Mach number is approximately -3 degrees. This could add about one decibel to levels calculated for level flight. On the other hand, long term root-mean-square average Mach number is 1.090 instead of 1.106 obtained from the Oceana data, offsetting the results by about one-half decibel. Within one-half decibel the final results are the same as stated in the RDEIS.

Effective Mach number is a means for calculating geometric parameters for a boom, specifically effective height and the distance along the flight path at which a boom produced at some instant at the airplane will reach the ground. The Mach number used to compute overpressures is the actual flight Mach number, not effective Mach number. Carpet booms for an airplane in a dive, or in a climb where the boom still is above cutoff conditions, have the same area as carpet booms for an airplane in level flight at the same flight Mach number. Boom widths are the same in both cases, but positions along the flight track where the boom starts and stops change with pitch angle.

115: A computation of CDNL is not needed. See responses #108 to 114. Contrary to the claim in this comment, the use of a normal distribution to estimate boom strengths from the Oceana data are valid. Using a chi-squared test for goodness of fit, there is less than one chance in twenty that the assumption of normality is not valid.

116: The CDNL at the center of the ellipse, assuming twice as many booms as for the average, is 3 decibels greater than the space average at 61.8 as calculated on page A-34 of the RDEIS, or 64.9 decibels, not 68.9 as claimed by the commenter. This is not in any way "completely unacceptable" as claimed.

117: While EPA and HUD have adopted guidelines on intermittent community noise levels, only OSHA has adopted a maximum level for impact noise. The OSHA standard is intended to minimize hearing loss to industrial workers who are exposed daily to the same or equivalent exposures. The acoustic energy in the range of 500 to 6,000 Hertz is most detrimental to hearing and is the zone of primary concern to OSHA. OSHA impulse

criteria are based upon a technology base consisting essentially of the impulse noise of small weapons fire. The brief intense impulse of weapon fire contains substantial acoustic energy in the same frequency range as industrial noise. On the other hand, sonic booms contain their maximum energy in the low frequency and subaudible frequency regions where the human ear is very insensitive and relatively more resistant to acoustic impulses. It should be noted that OSHA's limit of 140 db, which corresponds to about 4.2 psf, establishes a limit of 100 impulses or impacts per day at that intensity. This level of exposure is allowed each day. This does not suggest that the OSHA standard is acceptable criteria for community exposures; it emphasizes where we are in terms of regulatory standards. Again, no impulse noise standard or guideline for community exposure has been recommended by a federal agency or recognized scientific group.

118: The RDEIS does not state that "if there is no hearing damage, then there would be no physiological damage.." See paragraph 3.2.3.1 of the RDEIS. The Air Force has conducted a recent literature survey on the subject of noise and health and arrived at the same conclusion contained in the RDEIS. Additionally, Dr. Shirley Thompson of the University of South Carolina School of Public Health summarized her research team's "evaluation of the epidemiologic evidence available regarding the effects of noise on the cardiovascular system" in a paper given at the May 1983 meeting of the Acoustical Society of America. (A summary of EPA reports having NTIS designations PB 82-147752, PB 82-147760, and PB 82-147778.) Of some 800 potential publications, 83 were chosen for critical review. Each selected article was critiqued independently by an epidemiologist, a cardiologist, and an audiologist. Individual critiques were then integrated for study summary. The conclusion derived by the reviewers plus an additional set of consultants was: "Our analysis indicated that studies to date are inadequate for establishing cause-effect relationships between noise and cardiovascular disease. Recommendations made were aimed at improving study designs for future research." In terms of adequacy of current research, Thompson summarizes the results of the evaluation process as follows: "The relatively poor quality of the identified papers is reflected in the individual component and overall ratings of the reviewers....The proportions of studies meeting more than fifty percent of the evaluative criteria were as follows: On the noise component, 6% of the English studies and 11% of the translated research; on the health outcome component, 33% of the English and 32% of the translated research; and on the epidemiologic methodology component, 42% of the English literature and 11% of the translated studies. When the lowest of the three component scores is taken as the overall validity score, no study reported in the English literature and only one in the translated literature was rated higher than "4" on the 0-9 scale.....These ratings indicate that the literature is less than full informative for the task of judging the association between noise and cardiovascular effects." These reports by Thompson represent a milestone in noise research and hopefully a precedence has been set for future evaluations of research in this area. The bulk of the available scientific evidence suggests that noise levels that would yield

"hypertension, ulcers or pregnancy problems" are considerably in excess of those that will characterize the Reserve MOA.

119: See response #118 above.

120: The Air Force does not project that an impact would occur if it were decided to use ECM in the Reserve MOA. Clearance and approval would have to be obtained through the DOD area frequency coordinator who is responsible for resolving conflicting activities. No difficulty has been reported by VLA to date from ECM activities in WSMR.

121: See response #10.

122: Col Stamm qualified the use of simulators by stating they do provide a certain level of training and they are busy twelve hours doing this, but beyond a point, one must get in the airplane and "do it for real." The Air Force does not believe adding additional flight simulators meets the mission requirements and consequently is not considered an alternative.

While simulators are excellent procedural trainers, they do not give the pilot an opportunity to experience the intense, highly task saturated environment of an actual aerial engagement. A major portion of an F-15 pilot's responsibilities includes fighting other aircraft, possibly more than one at a time, while keeping track of the other members of his flight to ensure mutual support and protection to the maximum extent. This is impossible to practice in a simulator.

In addition, the simulator does not give the pilot an opportunity to experience high gravity forces nor develop aircraft handling skills essential to performing his air superiority mission. Simulating a "dogfight" with its dynamic, rapidly changing situation cannot be done. The pilot must be allowed to explore different realms of combat by actually flying a realistic wartime scenario to practice gaining a position which would allow him to kill an adversary with weapons he will have available.

123: The profile data available are sufficient to allow forecast of population effects and responses. The Air Force does not believe collection of additional demographic data would enhance the environmental analysis. Other than hearing loss, the levels of knowledge concerning noise induced health effects (at whatever level) is not refined enough for application to a detailed demographic profiles. For example, there are no accepted quantitative data showing a material difference in health effects of female exposure to sonic booms versus male exposures, early childhood to teenagers or adults.

124: While the alternative of flying up to 600 supersonic sorties (see paragraph 4.4.3 of the RDEIS) has been analyzed, (and it is pointed out that this is a viable alternative for the decision maker to consider), the preferred action is to split the sorties shortfall between the Reserve and Valentine MOA's. Only one ellipse would be used in the Reserve MOA.

125: Booms are not expected to be heard outside the MOA.

126: See response #124.

127: See response #10 and paragraph 3.2.4.1 of the RDEIS. The Air Force experience in the Desert MOA is not a valid comparison to the proposal for Reserve. The Desert MOA floor can sometimes start at ground level and continue through altitudes commonly traversed by general aviation aircraft. The Reserve supersonic MOA, on the other hand, starts at 15,000 ft MSL, well above area used by the greatest percentage of general aviation aircraft.

128: See response #83.

129: The Apache Creek Deaf Ranch is located on Route 32, north of Apache Creek and is well outside the area expected to be impacted by booms. The probability of a sonic boom reaching this location is small. See paragraph 3.2.3.1 for discussion on recreation.

130: See pages 10-5 through 10-7 of the RDEIS. Informal consultation with the Endangered Species Office of the Albuquerque Region, US Fish and Wildlife Service on March 8, 1984, revealed that the only known bald eagle nesting site in New Mexico is in the Centerfire Bog area. This nesting site has not been occupied since 1979.

131: The sophisticated navigation equipment on board the F-15, extensive FAA radar, coupled with the discipline and professionalism demanded of today's fighter pilot, makes incidents of "wandering far from the prescribed course" extremely rare. Dedicated training, constant evaluation and continual supervisory attention ensure that only the most qualified individuals fly high performance aircraft.

Damage claims are evaluated based on facts presented. Each claim would be considered fully and fair settlements made where there is reason to believe that the Air Force caused or contributed to the loss or damage. The incidents cited involve aircraft flying at 500 feet above the ground. All supersonic training in the Reserve area will be conducted at 15,000 ft MSL and above.

132: The Air Force has reviewed options to obtain more sorties in WSMR including flying on weekends. The latter has been determined not to be a viable solution that meets mission requirements. The Air Force will continue to work with WSMR officials to utilize the airspace to its maximum. Also see responses #58 and 59.

133: See responses 44, 45, 55 and 60. For reasons such as those stated in the last paragraph of the comment, the Air Force prefers to fly at WSMR and has made every effort possible to maximize its use of that area.

134: The fully instrumented air combat maneuver area involves no radars, but rather seven remote interrogator receiver stations designed to pick up signals from devices mounted on airborne F-15's. The Air Force has no plans to install air combat maneuvering instrumentation in the Reserve

MOA. Existing facilities such as FAA radar at Albuquerque and the Air Defense radars of NORAD, coupled with the F-15's on-board radars, provide needed coverage.

135: The Air Force appreciates the concern expressed, but believes the alternatives have been adequately reviewed, do not believe there is a need to delay the action until more definitive health effects are available, and do not believe the school at Reserve, NM will be adversely affected. The school is not within the ellipse area, and the probability of a sonic boom reaching the school is small.

136: See response #12.

137: The public hearing was postponed until the requested date.

138: See response #12.

139: See response #12.

140: See response #63.

141: See paragraph 4.2.1.3 of the RDEIS.

142: See response #63.

143: See response #39.

144: See responses #58 and 59.

145: Carpet or their associated focus booms will not reach the VLA as a result of 49 TFW operations in the Reserve MOA. Considering the closeness of the VLA to the MOA, it would be located within the quiet region between the primary and secondary carpets if, in fact, the latter occurs at all. Note that the distance from the Reserve maneuvering area to the VLA is about the same as the distance from the VLA to the WSMR northern area where supersonic operations are ongoing. The overpressures associated with secondary carpet booms are of the order of 0.001 to 0.01 psf with a frequency range of 0.1 to 1 Hertz.

146: See reponses #94 and 90, respectively for concern about population figures and economic study application.

147: See reponses #8, 108 to 114, 118, 150 and 361.

148: According to data from the US Army Construction Engineering Research Laboratory, the CSEL for a stick of dynamite exploded 200 feet away is 127 decibels; at 50 feet, 139 decibels. To be equivalent to a sonic boom of 113 decibels CSEL, the dynamite would have to be 1,000 feet away.

149: Uncritical statements are made repeatedly that people do not adapt to noise or that the startle response has been proven to not adapt after

repeated exposure. Such statements are meaningless without stating the parameters existing in the noise environment in which the supposed adaptation or lack of adaptation occurs. The situation is complicated and some parameters are incompletely understood, however, there are occasions where some adaptation does occur. Whether adaptation occurs or not is related to the intensity and frequency content of the noise, the level of the background noise exposure, the expectancy of the stimulation, etc. Research is continuing in this area and hopefully in the future, one can specify in analytical detail those situations where we would and would not expect adaptation. Also, adaptation can occur along many dimensions -- behaviorial, physiological and psychological, and we must be able to specify how adaptation occurs along each dimension.

150: The work of Dr. Hans Selye and his General Adaptation Syndrome and the "emergency reaction" of Cannon were first discussed in elementary textbooks of physiology and psychology well over thirty years ago. They were intended at the time mainly for instructional purposes and were admittedly simplified explanations or models for describing how our body reacts to stress and extreme fright. However, things have changed considerably since then and even these simplified models have evolved into a more sophisticated and realistic presentation. In attempting to assess the potential adverse effects of noise, even the updated simplified models are of little use for scientific investigation. For example, Selye argues that a certain amount of stress is necessary and probably good for people. Conversely, he points out that too much stress is bad for you and can lead to physical illness. Already, we know that stress can have opposite effects. Can stress really be defined? If it can be, how much produces adverse effects, under what circumstances, how do we measure it, how does it interact with other stressors, how does it lead to illness, etc.? Therefore, one can see that it is not a simple matter to study the effect of any stress. Furthermore, we are so literally saturated with articles in the popular press on avoiding or coping with stress that it is difficult to get a perspective on the problem. Obviously, there are physical, psychological and sociological factors involved in producing stress on a person, and whatever else stress may be, it is certainly multidimensional (it is produced by an interaction of many factors). Each stress has different levels and one cannot just assume that increasing levels just produce more of the adverse effect since, as Selye and many other investigators have pointed out, different levels may have different effects. To predict the effects of even a few stressors is a very complicated undertaking. Very precise statistical and experimental controls are needed to demonstrate the effects of any stress. The problem in studying the effects of noise on human health, in particular on the cardiovascular system, is that no one has been able to demonstrate a direct cause and effect relationship. Studies indicating relationships between noise and cardiovascular disorders did not control other risk factors such as smoking, obesity, diet, heredity, heat, cold, odors, etc. Furthermore, even with the lack of control, the results have been contradictory.

There have been many factors suggested as coronary risk factors and noise is but one of them. A relatively small number of these factors have been confirmed as "true risk factors." For example, smoking, drinking of alcoholic beverages, and obesity have generally been demonstrated as risk factors. These factors come through in studies in spite of all the complexity and are consequently thought to be "strong factors" in a statistical sense. Other factors such as noise (and many other factors such as crowding, chronic conflict situations, Type A versus Type B personality types, etc.) have not been shown to unequivocally contribute to coronary risk. This suggests that noise, if it is a risk factor, is a rather "weak factor". It is more likely to occur when combined with other factors. Future research will become more multivariate and complex and as a consequence, any one study is not likely to produce a dramatic demonstration of the adverse effect of noise on health. If any such connection exists, it most likely would be demonstrated by a series of well designed studies.

151: Paragraph 3.2.3.1 of the RDEIS starts out by assuming noise is one of the biological stressors and then proceeds to relate what is known in a form that can be measured against accepted guidelines. The document states there are scientists who believe the link between noise and ill-health is well defined. The discussion concludes by stating there are scientific uncertainties regarding health effects of long-term exposures to noise. Thus, both sides of the issue is exposed in the EIS.

152: See responses #150 and 151.

153: The reference is relevant. Auditory damage is usually first observed at high frequencies. Human hearing is most sensitive at the middle and higher frequencies associated with speech. The predominantly low frequency content of a sonic boom is even less a hazard to hearing than the much higher intensity airbag impulses.

154: Comment noted. This is not the opinion of the scientific community that has spent years doing research in this field.

155: Appendix D of the RDEIS states booms of similar intensity are slightly less acceptable to listeners indoors.

156: Comment noted. See responses #154 and 151. Long-term physiological damage is not ignored. In the absence of any evidence, all that can be said is it is a possibility, although highly improbable.

157: The RDEIS indicates Dr. Worthington's views are "among" the most pessimistic known to the Air Force and did not indicate him to be the only one with those views. Also see response #150.

158: See response #118.

159: See response #149.

160: See paragraph 3.2.3 of the RDEIS and response #65.

161: Comment noted. See responses #150 and 151.

162: Comment noted. See responses #118 and 150.

163: See response #118 and 150.

164: Medical studies of sonic booms and noises at the levels forecast in the RDEIS do not indicate harmful health effects would occur. Also see response #150.

165: Comment noted. The commenter's opinions are at variance to discussions in Chapter 3 of the RDEIS. Also see responses #2, 8, 118 and 150.

166: See response #12 and Chapter 4 of the RDEIS.

167: There is no conclusive data to show elderly people will be more susceptible to effects from sonic booms than anyone else. Also see responses #118 and 123.

168: See response #12.

169: Comment noted. Anticipated effects of the proposed action are as discussed in the RDEIS.

170: The RDEIS does not project real estate values would be significantly impacted by implementation of the proposed action.

171: See response #2.

172: Comment noted. See responses #8, 118, and 150.

173: The Air Force is sensitive to the people's concerns and has gone to great lengths to evaluate all options which have reasonable merit in meeting the mission requirements. Also see response #12.

174: See response #94.

175: If average sound level were taken over 12 hours, the relationship between sound level and response would be proportionally the same. Numerically, the average sound level scale would translate by 3 decibels. Current standards and regulations use a 24-hour basis.

176: Comment noted. The Air Force is not restricted from flying over National Park Service ruins. In coordination with VLA personnel, the Air Force agreed to adjust the eastern boundary to limit possible effect to VLA activities. This occurred prior to developing the Oceana methodology which indicates booms would not reach the VLA.

177: See response #135. No area within the MOA is expected to receive 30 sonic booms per day. See paragraph 3.2.3 of the RDEIS.

178: See response #90.

179: See responses #12, 60 and 58. Also see paragraph 4.2.1.3 of the RDEIS.

180: See response #2.

181: See responses #31 and 135, and paragraph 3.2.3.3 for discussion on structures.

182: See response #12. The Air Force is not aware of billions of dollars of wasted monies.

183: See responses #2, 8, 129, 135 and 309.

184: Comment noted. See responses #65 and 131.

185: See response #129.

186: See responses #8, 118, 123, and 150.

187: See responses #8, 118, 123, and 150.

188: Available information on animal impacts are addressed in paragraph 3.2.3.2 of the RDEIS which concludes there would not be significant impacts. While it's recognized this data is not specific to an individual animal and that some individual animals may show an adverse response, it does apply to them as a group. This section of the RDEIS concludes with the above thought.

189: See responses #173 and 83.

190: Public notification concerning availability of the RDEIS was made in the local news media. All requests for copies have been fulfilled.

191: See paragraphs 4.2.1.2 and 4.2.1.3 in the RDEIS and response #12.

192: See response #190.

193: See response #191.

194: Comment noted. This could be true if activity is conducted to its maximum indicated in the RDEIS.

195: Comment noted. In addition to the effect on average sound level, the RDEIS discusses individual event overpressures from carpet and focus booms.

196: Comment noted.

197: Comment noted. Site specific visits to study MOA's as well as the Reserve MOA (which has some sonic boom experience) did not find any indication that the economy had or would materially change due to sonic booms. Also see response #11.

198: See paragraph 3.2.3.1 of the RDEIS and response #163.

199: The Air Force concurs with the New Mexico Department of Game and Fish letter of September 7, 1979 and it required no comment. In reply to their subsequent letter, see responses #25 to 28.

200: Comments noted. Neither impacts are significant.

201: See response #94.

202: Yes, but conclusions do not differ from those already stated in the RDEIS.

203: See responses #65 and 131. No significant increase in subsonic noise is anticipated; see paragraph 3.2.2 of the RDEIS.

204: Sparsely populated areas are one of the desired criteria because it limits the number of people effected.

205: There is no indication that tourism will be significantly impacted.

206: Glenwood, NM is southwest of the proposed maneuvering ellipse and outside the Reserve MOA. No focus or carpet booms are expected to occur in this area.

207: The Air Force does not believe that a trial period is necessary. Several commenters have already stated that the area has experienced sonic booms so there appears to be no need for a trial period.

208: See response #94.

209: Comments noted. The RDEIS discusses each of the areas of concern and indicates there would be no significant impacts.

210: At the levels of sound to be associated with the flights, no health associated stress and heart effects are supported by the consensus of the scientific community. See responses #8 and 118.

211: The RDEIS does not project ranching operations would be significantly impacted. See paragraph 3.2.3.2 of the RDEIS and response #131.

212: The Air Force does not project any significant impacts to the local economy. See paragraph 3.2.4.3 of the RDEIS.

213: The Gila Wilderness Area is outside the Reserve MOA. Supersonic flight will be limited to the MOA. See response #63.

214: See response #212.

215: While this proposal does not propose supersonic flight over wilderness, it is pointed out there are other supersonic MOA's which are over wilderness as well as populated areas. There are no indications of significant effects from sonic booms in these MOA's. Also see response #63.

216: See response #92.

217: Quemado, NM is several miles north of Reserve MOA and would not be impacted by aircraft operations in the MOA.

218: See second paragraph of response #2 and paragraph 3.2.3.2 of the RDEIS.

219: See paragraphs 3.2.3.3 and 3.2.4.3 of the RDEIS.

220: See response #94.

221: See response #39.

222: Comment noted. See paragraph 9.1 of the RDEIS.

223: See responses #13 and 55.

224: See responses #65 and 66.

225: The Economic Impact Study concluded that real estate values would not be significantly impacted. See paragraph 3.2.4.3 of the RDEIS.

226: There is no evidence to support the statement that the old and very young are most sensitive to sonic booms. The scientific consensus is that the evidence to date demonstrates that individuals cannot be sterotyped in this respect. Also, see responses #8, 118 and 150.

227: The Catwalk is outside the projected supersonic ellipse and Reserve MOA. It should not be impacted by the proposed actions. See paragraph 3.2.3.4 of the RDEIS.

228: See first and second paragraphs of response #2.

229: See response #225, 135 and 206.

230: The Air Force does recognize the scenic vista in the Reserve NM area. Supersonic flight is not restricted over National Parks; however, aircraft, both civilian and military, are "requested" to maintain a minimum altitude of 2,000 feet AGL. It is emphasized that the lowest altitude for supersonic flight in the Reserve MOA is 15,000 feet MSL or 8,000 to 9,000 feet AGL.

231: See paragraph 3.2.3.1 of the RDEIS.

232: Those topics are discussed in Chapters 3 and 4 of the RDEIS.

233: Chapter 3 of the RDEIS addresses potential effects on recreation, economics, and structural damage. There are no indications of either being significantly impacted. The wilderness area is outside the MOA and should not be significantly impacted.

234: See responses #8, 118, 150 and 210.

235: See paragraphs 3.2.3, 3.2.3.1, and 3.2.3.3 of the RDEIS.

236: See responses #8, 118 and 150.

237: Comment noted. See responses #58, 59 and 132.

238: Comment noted. The Air Force believes the analysis of alternatives is adequate. Also, see responses #12 and 66.

239: See response #83.

240: See response #90.

241: The "lateral spread" of sonic booms is not obscured in the RDEIS. Equations to calculate lateral spread are provided on page D-25. The discussion of the elliptical contours clearly covers this topic. The RDEIS does not say effects of sonic booms would be contained within the 12 by 18 NM ellipse; they should be contained within the 1.0 cutoff ellipse. See paragraph 3.2.3 of the RDEIS and response #65.

242: See response #63.

243: See first paragraph of response #2. Consultation with the USFWS on endangered species is discussed in the EIS. The Air Force concludes there should be no significant impact to wildlife in the Reserve MOA. It is pointed out that there is National Forest land under the Desert MOA in Nevada which is approved for supersonic flight.

244: See responses #8, 118, 153, 156, 103 and 107.

245: This comment was addressed in the initial DEIS. See response #243. In respect to the San Francisco River being protected under the Wild and Scenic Rivers Act, no portion of the river within the MOA has been determined or recommended as eligible for designation as a wild, scenic or recreational river under the provisions of the referenced Act. Air Force operations in the MOA would not alter the physical characteristic of the river and thus, would not prevent its future nomination should it be determined to meet the criteria.

246: This comment was addressed in the initial DEIS. See Chapters 3 and 4 of the RDEIS for revised and updated analysis of impacts and alternatives.

247: See response #132. Discussion on compensation in the RDEIS is considered adequate. If the commenter has specific questions, they should be directed to the address provided in paragraph 5.3.3 of the RDEIS.

248: See response #206.

249: See response #206.

250: The Air Force does not project any one individual would be subjected to

more than two to three booms per day during those days that the Reserve MOA would be used. See response #164.

251: Comment noted. See response #173.

252: See responses #8, 118, 164, 206, and 226.

253: See response #206 and 225.

254: See responses #173 and 12.

255: See responses #8, 118 and 164.

256: See responses #205, 206 and 225.

257: See responses #8, 118 and 164.

258: Comment noted.

259: See responses #8, 118, 164, 210, 226 and 225.

260: See responses #8, 118 and 164.

261: See response #206.

262: See response #206 and 225.

263: Comment noted. See responses #2, 8, 118, 164, and 173.

264: See response #60.

265: Comment noted. Chapter 3 provides discussion of these issues and concludes there would be no significant impact.

266: See paragraph 4.2.1.3 of the RDEIS and response #12.

267: See responses #8, 118, 164 and 37.

268: Comment noted. See responses #2, 8, 118, 94, and 164.

269: Comment noted. Current operations in the Luna, NM area are not associated with this proposal. Additionally, there would be no supersonic operations in the Luna area as a result of this proposal.

270: See response #12.

271: See response #173.

272: Operations in this area are not a part of this proposed action. The minimum altitude proposed for supersonic operations is 15,000 feet MSL and will not be conducted over Mogollon, NM which is outside the Reserve MOA.

273: The commenter confuses the spatial effect of a sonic boom for the lateral spread dimension. See paragraph 3.2.3 of the RDEIS. There would be no supersonic operations in the Ouemado, NM area as a result of this proposed action.

274: See response #265.

275: No additional studies are considered necessary because the potential impact is not considered significant. The Air Force is including a list of species identified in the Gila National Forest in this document as a continuation to Appendix C. Also see response #2.

276: Comment noted. Chapter 3 of the RDEIS addresses potential impacts to wildlife, humans, and recreation activities and concludes neither would be significantly impacted. If the proposal is adopted, it would continue until the airspace is no longer needed for this type activity. The range of overpressures and frequency of anticipated boom occurrence is overstated; see paragraph 3.2.3 of the RDEIS.

277: See response #63 and 230.

278: See response #103.

279: See responses #2 and 103.

280: See responses #63 and 230.

281: Comment noted. Chapter 3 of the RDEIS addresses these areas of concern and concludes the potential impacts would not be significant.

282: See responses #12, 63 and 173.

283: Pleasanton, NM is outside the Reserve MOA and should not be impacted.

284: See response #103.

285: See response #63.

286: See responses #12 and 66. The Air Force has gone to great lengths in trying to analyze possible options which could meet mission requirements; results of the analysis are contained in Chapter 4 of the RDEIS.

287: See response #63.

288: The majority of the sonic booms expected to occur in the Reserve MOA will be about two to three pounds per square foot or less. See paragraph 3.2.3 of the RDEIS. Regulating against supersonic transport operations was due to a number of factors, not just because of a specific overpressure.

289: See responses #63 and 288.

290: See responses #12, 63, and Chapter 4 of the RDEIS.

291: See responses #8, 118 and 150.

292: Parts of the Desert MOA in Nevada are over National Forest lands.

293: See responses #63 and 288.

294: See responses #8, 118, 173, 63, and 197.

295: See response #63.

296: See response #63.

297: Apache Creek, NM is outside the sonic boom ellipse and should not be exposed to twelve sonic booms per day. Also see response #129.

298: Figure 4 in Appendix D of the RDEIS shows the composite footprint of (subsonic and supersonic) operations in the Oceana study. Figure 5 in Appendix D shows only that portion of the flight (footprint) where the aircraft was supersonic. The aircraft did remain within the larger boundary of the Warning Area. Also see response #65.

299: Reducing the number of supersonic training sorties to that which can be flown in WSMR would not allow meeting the 49 TFW mission requirement. See paragraph 4.4.2.2 and 4.2.1.3 of the RDEIS respectively, for discussion on weekend flights at WSMR and flying over the ocean.

300: See response #106.

301: The RDEIS discusses in several places that WSMR cannot meet the long term mission requirement of the 49 TFW. Also see paragraph 4.2.1.3 for discussion of over ocean flights.

302: The proposed supersonic activity to be conducted in a portion of the Reserve Military Operation Area (MOA) will not be conducted below 15,000 feet MSL. The supersonic airspace block will be 15,000 feet MSL to 51,000 feet. This will place the participating aircraft at altitudes of about 8,000 to 9,000 feet above ground level, which should not conflict with your low altitude helicopter operations. The Reserve MOA has been used for this same type training for more than 5 years, except the aircraft are restricted to subsonic speeds, and we have no reported conflicts between the MOA training activities and nonparticipating aircraft.

303: See response #302 above.

304: See response #63.

305: See responses #103 and 288.

306: See response #63 and paragraph 3.2.3 of the RDEIS.

307: The consensus of the scientific community indicates that at the forecasted level and frequency of the proposed flights, no significant health impacts should be expected. Paragraph 3.2.3 of the RDEIS discusses the number of sonic booms expected to occur at any given location; this number is 2 to 3 booms per day, not 12 as indicated by this comment. Also see responses #8, 118 and 148.

308: Comment noted. See the second paragraph of response #2 and response #63.

309: The Economic Impact Study does not indicate the area would suffer a significant economic impact if the proposed action is adopted.

310: Page 10-5 of the RDEIS is an FWS letter dated January 18, 1982 which provides a biological opinion on the peregrine falcon. The letter also recommends that proposed altitude limits of the MOA be maintained and enforced to provide protection of the bald eagle. The Air Force agrees with these recommendations and plans to work with FWS should future conflicts arise. Also see response #2.

311: The first two references are reference numbers 30 and 35, respectively in the RDEIS. The third reference was reviewed during preparation of the RDEIS. Pertinent citations in the 1980 EPA document had already been referenced in the RDEIS, so that document was not included in the bibliographic reference list.

312: See response #39.

313: See responses #2 and 206.

314: See responses #2 and 206.

315: See responses #8 and 118.

316: See responses #8, and 118.

317: Comment noted. Chapter 3 of the RDEIS addresses the attributes of concern and concludes there would not be any significant environmental impact.

318: Comment noted. The opinion expressed here differs from that of the FWS (see first paragraph of response #2) and Air Force experience.

319: See response #93.

320: The ellipse shown in the RDEIS is based on the Oceana data. Only one ellipse is shown because that is all the area can support at one time. Additionally, moving the ellipse could result in sonic booms impacting the local communities. It should be noted that the desired waiver would be granted for a three year period; after this time, a new environmental analysis to address any significant change would be required before a new waiver is issued. Thus, analysis beyond three years is not necessary.

321: The duration of the proposed action would be until the Air Force no longer needs the area for supersonic operations. See response #320 above.

322: Comment noted. The Air Force has analyzed noise and sonic boom impacts based on EPA and HUD recommended guidelines as indicated in the RDEIS.

323: The commenter is correct that there are no real-time noise measurement data available to document existing conditions. It is realized that noise levels fluctuate drastically from location to location in this type environment; it can range from 10 dB (rustling of leaves) to 100-110 dB (chain saw noise). However, the cited references indicate average community noise to be within the range stated in the RDEIS. Also see response #15.

324: The RDEIS noise analysis is in agreement with the general procedural guidelines of CHABA Working Group 69 and noise criteria of CHABA Working Group 84. Projected noise levels are between DNL 55 and 75 and a full Noise Environment Documentation (NED) is provided to show percent highly annoyed based on associated noise levels for the ellipses. The percent highly annoyed at these noise levels are taken to be the level of impact rather than trying to determine a delta from a nonmeasured, generalized value for existing conditions. This is a conservative approach.

325: See paragraph 3.2.3 of the RDEIS and response $65

326: The RDEIS defines the exposure area, describes the stimuli, and provides estimates on population. These are the necessary factors for evaluating impacts.

327: Comment noted.

328: Comment noted. See responses #8, 118 and 164.

329: See response #63.

330: The Air Force's decision to publish a Revised Draft EIS was based on public request and length of time between the initial draft and the Revised Draft. Field experiences and observations reported in the initial draft are now supported by special studies and state-of-the-art modeling. The Air Force believes the public has a right to review this data before a final decision is made and consequently gave the public the opportunity. In no way should the Air Force's decision be interpreted as indicating the initial draft was inadequate.

331: See response #6.

332: Supersonic and subsonic flight in the Sells MOA began prior to the National Environmental Policy Act (NEPA), thus the ongoing NEPA process to analyze continuation of this activity should not be viewed in the same manner as if it were a new area. The Air Force's need of the area

to maintain combat aircrew readiness balanced against an understanding of environmental impacts of supersonic flight results in continued use of the MOA while the NEPA process is conducted.

333: The term "set aside" as used in paragraph 1.1 of the RDEIS does not mean to literally restrict or segregate. It means to identify, list, or approve the area for supersonic flight.

334: The Air Force is not aware of any definition for a MOA that provides a legal basis for stating the operations conducted therein are ultra-hazardous. MOA's are established under criteria provided in FAA Handbook 7610.4, "Special Military Operations", and FAA Handbook 7400.2, "Procedures for Handling Airspace Matters." The proposed action meets the criteria identified in these handbooks. One of the purposes for designating and charting a MOA is to improve safety by alerting civilian pilots to areas where military airacraft are operating. Additionally, the F-15 has onboard radar that further enhances the area control provided by FAA.

335: See response #39.

336: See response #111 and paragraph 3.2.3 of the RDEIS where additional studies on superbooms are provided.

337: The comment indicates that complaints were used to derive percent "annoyed" which is not true. Three rounds of social surveys which included urban, suburban and rural subgroups, were used to obtain dose-response data. Extrapolated data from the study can be applied with confidence.

338: See response #336.

339: The French "Jericho" test data, along with consultation with the United States' representative to that test, provide a significant basis for the analysis provided in paragraph 3.2.3 of the RDEIS. What appears to be at variance is an understanding of the focus phenomenon in respect to cutoff Mach number; which is covered in paragraph 3.2.3 of the RDEIS.

340: Comment noted. There are many people, as well as international experts, who sometimes make uncritical comments about the effects of noise. This is one case where group opinion is probably better than individual opinion. A group is more likely to consider all aspects of a decision. The EPA and HUD statements and criterion represent the opinion of groups.

341: Col Smith's personal comment addressed his recognition of the issue to protect one's backyard from a nonparochial requirement (regardless of the level of impact). He pointed to the fact that some people express concern over the endangered peregrine falcon in Reserve, but no such concern is mentioned when it's suggested to double the impacts in the Valentine MOA which also has a peregrine falcon. (The same point could

be made about the many other attributes that are common to the two areas.) It was this point that Col Smith was expressing during the 1979 public hearing.

342: See response #60.

343: The Air Force does not propose to train at the upper end of the flight envelope in Valentine and Reserve. Functional flights at Mach 2.5+ can and are performed over the White Sands Missile Range. Projected operations for Valentine and Reserve MOA's require external fuel tanks which would have to be dropped during flight in order to achieve the higher flight speeds. This does not degrade the value of distant training areas; pilots must develop conservation habit patterns while employing the aircraft to its optimum configured capability. Although the average supersonic flight speed in Valentine and Reserve would be about M1.1, it could range between 1.0 and 1.5+ Mach.

344: See paragraph 3.2.3 of the RDEIS.

345: The comment grossly overstates the potential impact. The probability, under a most conservative estimate as indicated in the RDEIS, is still no greater than 0.003 that anyone will get focus booms.

346: This is precisely why CSEL is used to assess human response instead of peak overpressure.

347: Comment noted. While the data is not perfectly gaussian, it does allow for a very conservative statistical analysis. The only assumption of normality is on Page 3-5 and Table 3 where probabilities of various boom strengths are calculated. This assumption overstates the case since the true distribution is skewed to lower values. Also see response #115.

348: First paragraph is correct but the second is not. Turbulence always decreases boom magnitude, not increasing magnitude due to focusing. Of course, rise time and peak impulse are highly significant, hence CSEL. A "focused boom is a focused boom" only as much as a stable, uniform atmosphere permits it to be.

349: A focus boom does not move along the flight track like a carpet boom. See paragraph 3.2.3 of the RDEIS.

350: If the focus is at high altitude, it can have no effect on people on the ground. See paragraph 3.2.3 of the RDEIS.

351: No exception is taken to the "quote"; it does not say the focus always reaches ground.

352: See response #149.

353: See response #118.

354: The F-15 and T-38 aircraft already use WSMR airspace concurrently as suggested. At the rates which both aircraft currently fly, no more oportunities for co-use are available. Weekend flying at WSMR in the context suggested is not a viable alternative. Additionally, the northern extension of WSMR provides supersonic airspace and is over private lands.

355: There were 17 accidents from the time the F-15 entered the Tactical Air Command inventory through 1982. See paragraph 5.2 of the RDEIS.

356: During the past three years, Holloman AFB has had two claims submitted for damage from sonic booms. One was denied, the other is still pending.

357: See paragraph 3.2.3 of the RDEIS and response #65.

358: Based on the Oceana Study, sonic booms should not impact outside the MOA.

359: Data from reference 58 to the RDEIS indicates SR-71 overpressures in the area could range up to about 3 psf, depending on the aircraft's speed and altitude and one's location from the flight track. This is about the same level anticipated to occur in the ellipse if the proposal is adopted.

360: See response #206.

361: The Air Force has reviewed available data on sonic booms as related to health effects and concludes that the noise level would not cause any hearing loss or direct physiological ill-health. Sonic booms, like most unwanted sound, can be considered a biological stressor and an annoyance to individuals. Whether these latter factors lead to clinical findings is a subject of debate among scientists. The general consensus is that, based on available data, there is no conclusive evidence to show a link between noise and physiological ill-health. More research with better environmental controls are needed to help identify and quantify the dose-response relationship. The noise levels associated with the proposed action are calculated under very conservative (worst case) terms and are shown to be low in respect to accepted guidelines. The Air Force believes enough is known about sonic booms to state that, at the proposed level, no significant environmental impact is expected.

362: The Air Force proposes to split the operations between the two areas to help reduce the potential annoyance level. While calculated data shows the levels are not significant, splitting the action further reduces the impact.

363: The number of "highly annoyed" is based on accepted scientific guidelines. It is not surprising that this number significantly differs from the number of pre-action responses. This phenomenon has been observed many times on environmentally controversial issues. Of the responses received from the general area, less than one-third came

from inside the MOA.

364: The Air Force believes the available data supports the conclusions made in the RDEIS. Also see response #2.

365: The Catron County economy was analyzed by a team of economists under contract to the Air Force. The results were reported in the Economic Impact Study and the EIS.

366: The Air Force has gone to great lengths to evaluate all options which have reasonable merit in meeting the mission requirements. The option of flying weekend sorties at WSMR has been determined not to be a viable solution for meeting the mission requirements. The subject of continued support of the 49 TFW mission at WSMR was discussed in February 1984 between Senator Bingaman and Major General Fulwyler, Commander of WSMR. The conclusion of that discussion supports the position reported in the RDEIS. (From a planning perspective, WSMR cannot provide for more than about 600 supersonic sorties per month.) See responses #12, 54, 58 and 59.

367: See paragraph 4.3 of the RDEIS.

368: As discussed in response #18, the Air Force does plan to develop stand-along acoustic monitoring equipment for validating the predictive model. This work must be accomplished within an ACMI arena which is not available in the Reserve MOA. The proposal to monitor seismic and acoustic waves for purposes of determining if health effects and structural damage are within limits described in the RDEIS is not considered practical. The Air Force believes the RDEIS adequately portrays the seismo-acoustic properties of sonic booms as well as their potential effects to people, wildlife, and structures. Should New Mexico Institute of Mining and Technology decide to monitor seismo-acoustic waves in the Reserve MOA, the Air Force will cooperate by providing aircraft schedule information and technical consultative support.

369: See response #94. The fourteen mile buffer around the MOA was dropped after the Oceana Model showed booms could be contained in the MOA.

370: See page 12 of Appendix D to the RDEIS where it states "...there was a significant increase in the occurrence of minor paint cracking over nail heads and in corners in two of the test houses...." It should be noted that the Oklahoma City tests were military airplanes, not SST's. Each claim will be considered fully and fair settlements made where there is a reason to believe that the Air Force caused or contributed to the loss or damage.

371: See response #102.

372: See response #90.

373: Comment noted. The proposed action is to conduct up to 300 supersonic sorties per month in the Reserve MOA. See response #124.

374: See responses #65 and 131.

375: Yes, it is quite possible to fit a 12 X 18 NM ellipse within the questioned MOA's, but that alone does not satisfy the airspace requirements. Sonic booms can impact an area larger than the maneuvering ellipse (see paragraph 3.2.3 of the RDEIS) and enough room is needed to set up the flight mission. The Air Force has stated it needs at least a 40 by 50 NM block of airspace which meets the established criteria. The areas suggested by this comment do not meet the criteria. Also see response #65.

376: See responses #12, 83, and 133.

377: See response #39.

378: See responses #135.

379: This comment is similar to comments 109, 110 and 111 which have been replied to earlier.

380: Comment noted. See responses #148 and 150.

381: See responses #149 and 150.

382: See responses #8, 118 and 150.

383: The referenced article by Richard A. Wood, "Jet Stream - Sonic Boom Phenomena, Tucson, Arizona, April 1975," Weatherwise, pp 152-155, August 1975, suggests that by a process of elimination the sonic booms came from the Luke AF Range near Gila Bend, Arizona. The public reported vibrating tremors which were felt during a five day inversion period when the windspeed in the jet stream exceeded 100 mph. Reportings of vibrating tremors suggest the phenomena were secondary carpet booms. As indicated previously, the overpressure levels associated with these type booms is of the order of 0.001 to 0.01 psf with a frequency range of 0.1 to 1 Hertz. These booms are generally not audible but can cause building vibrations which tend to be more of a curiosity than a source of serious community complaint. Thus, these type booms are not discussed in the RDEIS.

384: Comment noted.

385: See paragraph 3.2.3 of the RDEIS for a discussion of focus booms.

386: The commenter does not live in or close to the proposed ellipse area and should not be impacted by sonic booms from the proposed action.

387: See response #129.

388: See response #94. The Air Force notes this commenter indicates the following population figures: Apache Creek - 1,520; Aragon - 179; Horse Springs - at least 50; Cruzville - 79; and Reserve - greater than 379 (number of school children). This represents a population of more than 2,207 people within the MOA. These figures are different than the

1980 census data.

389: See response #359.

390: There is national forest land under portions of the Desert MOA in Nevada, and national parks are not "out of bounds for supersonic flight training." Both civilian and military aircraft are requested to maintain a minimum altitude of 2,000 feet AGL. See response #63.

391: See paragraph 3.2.3 of the RDEIS for a discussion on location of the maneuvering ellipse. Also see response #63.

392: See responses #8, 118 and 149.

393: See responses #2, 205 and 206.

394: See response #361.

395: See responses #118, 123, 150 and 167.

396: See responses #83 and 173.

397: See paragraph 4.2.1.2 of the RDEIS.

398: See response #129.

399: See response #129.

400: The Reserve school is outside the maneuvering and cutoff ellipses and should not be significantly affected. The RDEIS concludes that there would be no significant effect on cattle and ranching operations in the area. See paragraph 3.2.3.2 of the RDEIS.

401 See response #90. The Air Force has concluded that, based on available data (local, county and state), the proposed action would not significantly impact the economic base in the area.

402: See responses #361 and 362.

403: The purpose of the public hearing was twofold. It provided an opportunity for the public to be briefed on the 49 TFW mission at Holloman AFB, the need for supersonic flight, and the locations considered as alternatives. The public had an opportunity to ask questions on the mission, operational aspects of the proposal and alternatives to assist in their gaining firsthand knowledge. The second purpose of the hearing was to provide an opportunity for those individuals to comment that preferred to speak rather than write letters. The hearing was not a forum for debate.

404: The area already experiences sonic booms of the magnitude described in the RDEIS, only the relative frequency would increase if the proposal is accepted. Also see response #359.

405: Comment noted. See reponse #170.

ERRATA

TO

RDEIS

ERRATA

1. p. 3-26, Fig 13: The map scale should be 5 and 10 versus 10 and 20, respectively.

2. p. 4-2, paragraph 4.1.1.2(1): Delete reference to Cloudcroft and Mescalero. These towns are adjacent to but not beneath the Beak MOA.

3. p. 4-6, paragraph 4.1..1.2(6): Change fourth sentence to read: The area has one established airport with a hard surface runway and minimum general aviation traffic.

4. p. 4-19, Figure 17: The numbers inside the ellipses are the number of people living at the indicated location. Numbers outside the ellipses are map key references and has no relationship to the number of people living at those locations.

5. p. 11-1, reference #4: Change 1973 to 1972.

6. p. 11-3, reference #38: Change Glenn to Gunn.

7. A list of wildlife on and adjacent to the Gila National Forest is added to Appendix C.

8. A list of preparers is provided herein as Appendix K.

PRELIMINARY FIELD CHECKLIST

MAMMALS OF THE GILA NATIONAL FOREST AND IMMEDIATE AREA
U.S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE
GILA NATIONAL FOREST



Revised January 1974

ACKNOWLEDGEMENTS
Bonnee Turner - Art Work
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Joe Janes and Bill D. Rogers - Compilers, Forest Naturalists

FIELD GUIDES AND REFERENCES

A Field Guide to the Mammals, Butt, W. H. and R. P. Grossenheider, 1964.
Mammals of New Mexico, Bailey, Vernon, USDA 1931.
Mammals of the Southwestern Deserts, Olin, George, 1954.
Mammals of the Southwest Mountains and Mesas, Olin, George, 1961.
"National Park Service Field Notes", Gila Cliff Dwellings National Monument.

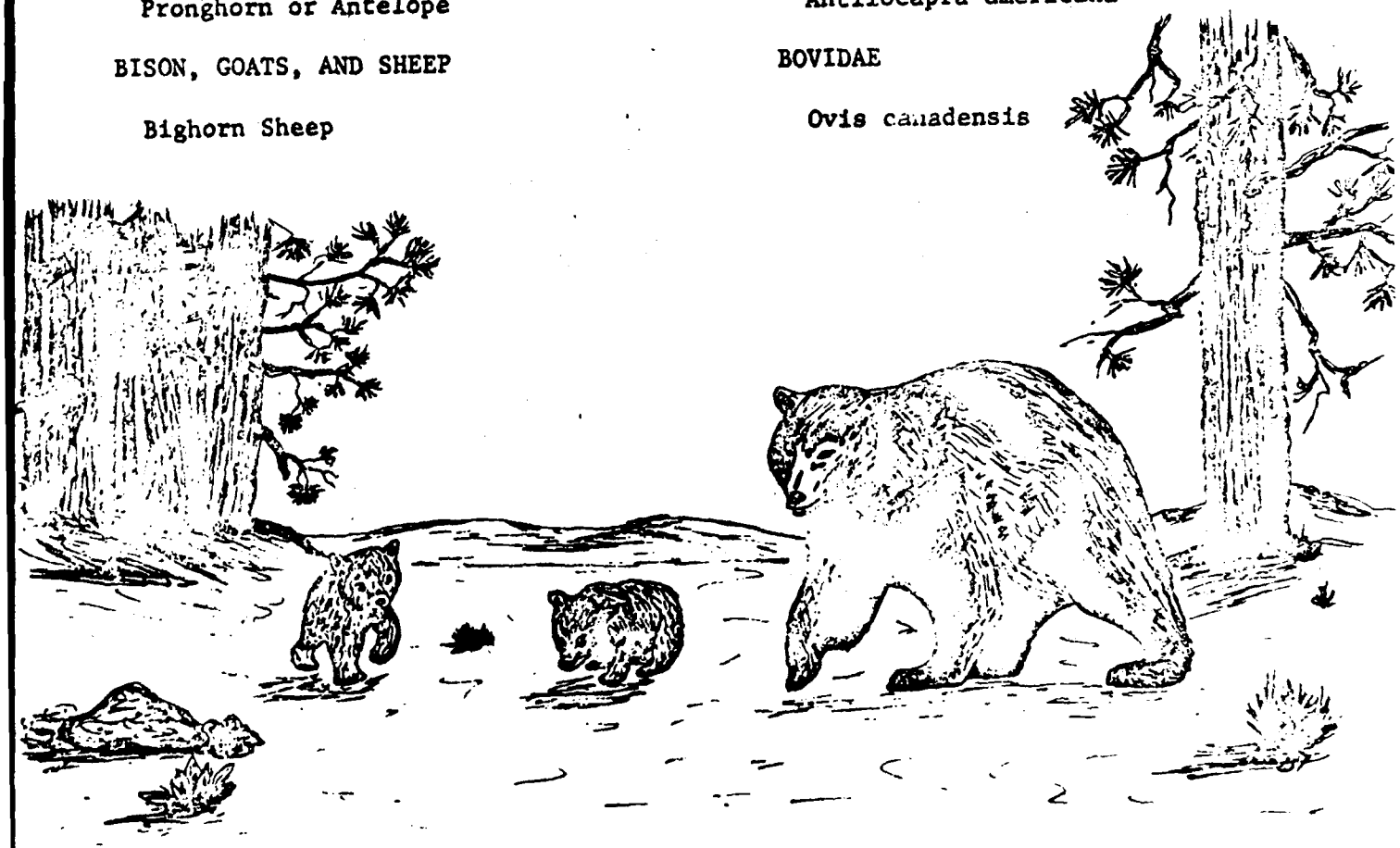
NOTE: MANY MAMMAL SPECIES ARE PROTECTED BY NEW MEXICO STATE LAWS

Common Name	Scientific Name
INSECT - EATERS	INSECTIVORA
SHREWS	SORICIDAE
Merriam Shrew	Sorex merriami
Vagrant Shrew	Sorex vagrans
Gray or Desert Shrew	Notiosorex crawfordi
BATS	CHIROPTERA
PLAINNOSE BATS	VESPERTILIONIDAE
Yuma Myotis	Myotis yumanensis
Long-eared Myotis	Myotis evotis
Fringed Myotis	Myotis thysanodes
Long-legged Myotis	Myotis volans
California Myotis	Myotis californicus
Small-footed Myotis	Myotis leibii
Short-eared Myotis	Myotis auriculus
Silver-haired Bat	Lasionycteris noctivagans
Big Brown Bat	Eptesicus fuscus
Red Bat	Lasiurus borealis
Hoary Bat	Lasiurus cinereus
Spotted Bat	Euderma maculata
Western Big-eared or Lump-nosed Bat	Plecotus townsendii
Mexican Big-eared Bat	Plecotus phyllotis
Pallid Bat	Antrozous pallidus

FREETAIL BATS	MOLOSSIDAE
Mexican Freetail Bat	Tadarida brasiliensis
Big Freetail Bat	Tadarida macrotis
FLESH EATERS	CARNIVORA
BEARS	URSIDAE
Black Bear	Ursus americanus
RACCOON, COATIS & RINGTAILS	PROCYONIDAE
Raccoon	Procyon lotor
Coati	Nasua narica
Ringtail	Bassariscus astutus
WEASELS, SKUNKS, ETC.	MUSTELIDAE
Longtail Weasel	Mustela frenata
Badger	Taxidea taxus
Spotted Skunk	Spilogale putorius
Striped Skunk	Mephitis mephitis
Hooded Skunk	Mephitis macroura
Hognose Skunk	Conepatus leuconotus
DOGS, WOLVES, & FOXES	CANIDAE
Coyote	Canis latrans
Kit Fox	Vulpes macrotis
Gray Fox	Urocyon cinereoargenteus
CATS	FELIDAE
Mountain Lion	Felis concolor
Bobcat	Lynx rufus
GNAWING MAMMALS	RODENTIA
SQUIRRELS	SCIURIDAE
Whitetail Prairie Dog	Cynomys gunnisoni
Rock Squirrel	Spermophilus variegatus
Spotted Ground Squirrel	Spermophilus spilosoma
Golden-mantled Squirrel	Spermophilus lateralis
Cliff Chipmunk	Eutamias dorsalis
Greyneck Chipmunk	Eutamius cinereicollis
Tassel-eared Squirrel	Sciurus aberti
Arizona Gray Squirrel	Sciurus arizonensis
Red or Spruce Squirrel	Tamiasciurus hudsonicus

POCKET GOPHERS	GEOMYIDAE
Valley Pocket Gopher	Thomomys bottae
Pygmy Pocket Gopher	Thomomys umbrinus
POCKET MICE, KANGAROO MICE AND KANGAROO RATS	HETEROMYIDAE
Silky Pocket Mouse	Perognathus flavus
Desert Pocket Mouse	Perognathus penicillatus
Rock Pocket Mouse	Perognathus intermedius
Hispid Pocket Mouse	Perognathus hispidus
Bannertail Kangaroo Rat	Dipodomys spectabilis
Ord Kangaroo Rat	Dipodomys ordi
Merriam Kangaroo Rat	Dipodomys merriami
BEAVER	CASTORIDAE
Beaver	Castor canadensis
MICE, RATS AND VOLES	CRICETIDAE
Western Harvest Mouse	Reithrodontomys megalotis
Cactus Mouse	Peromyscus eremicus
Deer Mouse	Peromyscus maniculatus
White-footed Mouse	Peromyscus leucopus
Brush Mouse	Peromyscus boylei
Pinon Mouse	Peromyscus truei
Rock Mouse	Peromyscus difficilis
Southern Grasshopper Mouse	Onychomys torridus
Whitethroat Woodrat	Neotoma albigula
Stephens Woodrat	Neotoma lepida
Mexican Woodrat	Neotoma mexicana
Southern Plains Woodrat	Neotoma micropus
Hispid Cotton Rat	Sigmodon hispidus
Least Cotton Rat	Sigmodon minimus
Longtail Vole	Microtus longicaudus
Mexican Vole	Microtus mexicanus
Muskrat	Ondatra zibethica
OLD WORLD RATS AND MICE	MURIDAE
Black Rat	Rattus rattus
House Mouse	Mus musculus
PORCUPINE	ERETHIZONIDAE
Porcupine	Erethizon dorsatum

PIKAS, HARES, AND RABBITS	LAGOMORPHA
HARES AND RABBITS	LEPORIDAE
Blacktail Jackrabbit	Lepus californicus
Eastern Cottontail	Sylvilagus floridanus
Desert Cottontail	Sylvilagus auduboni
EVEN-TOED HOOFED MAMMALS	ARTIODACTYLA
PECCARIES	TAYASSUIDAE
Peccary or Javelina	Pecari angulatus
DEER	CERVIDAE
Rocky Mountain Elk	Cervus canadensis
Mule Deer	Odocoileus hemionus
Whitetail Deer	Odocoileus virginianus
PRONGHORN	ANTILOCAPRIDAE
Pronghorn or Antelope	Antilocapra americana
BISON, GOATS, AND SHEEP	BOVIDAE
Bighorn Sheep	Ovis canadensis



PRELIMINARY FIELD CHECKLIST

BIRDS OF THE GILA NATIONAL FOREST AND IMMEDIATE AREA
U. S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE
GILA NATIONAL FOREST

Revised June, 1974

ACKNOWLEDGEMENTS

Dr. D. A. Zimmerman, Western New Mexico University
Dr. B. J. Hayward, Western New Mexico University
Joe Janes and Bill D. Rogers - U.S. Forest Service, Compilers
Bonnee Turner - Art Work

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"New Mexico Ornithological Society Field Notes", Box 227 Cedar Crest, NM 87008
Check List of the Birds of New Mexico, Hubbard, John P., 1970.
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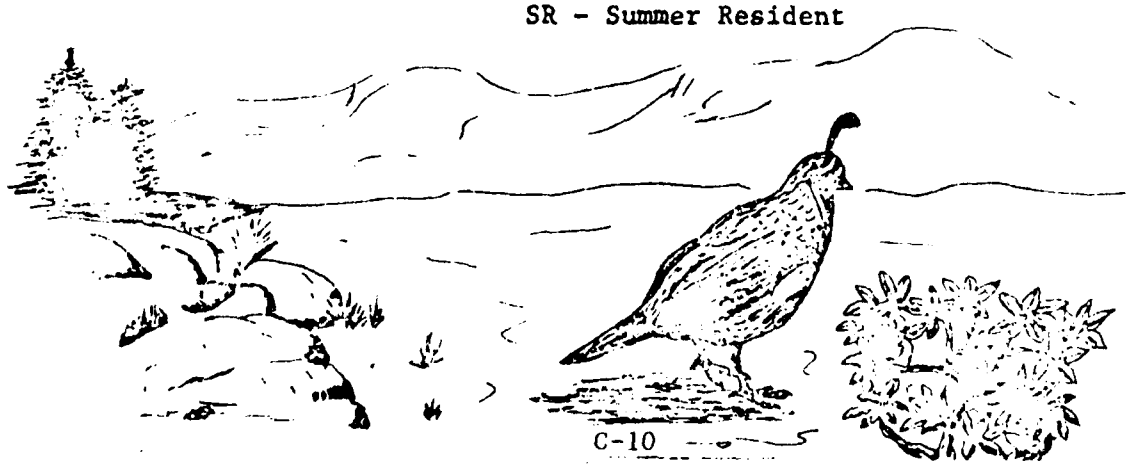
SUGGESTED LOCATIONS FOR BIRD STUDY
(See Gila National Forest Recreation Maps)

Gila Forks	Lake Roberts
Gila River	Cherry Creek
Bill Evans Lake	Bear Mountain
Whitewater Canyon	Little Walnut
Burro Mountains	Emory Pass
Wall Lake	Willow Creek
Snow Lake	San Francisco River

NOTE: All bird species are protected by Federal, and in most cases, State Laws.

SYMBOLS

* - Rare
R - Resident
T - Transient
WR - Winter Resident
SR - Summer Resident



Common Name	Status	Notes or Comments
GAVIIDAE - LOONS		
Common Loon	* - T	
PODICIPEDIDAE - GREBES		
Horned Grebe	* - T	
Eared-Grebe	* - T	
Pied-billed Grebe	SR	
Western Grebe	T	
PHALACROCORACIDAE - CORMORANTS		
Double-crested Cormorant	T	
Olivaceous Cormorant	* - T	
ARDEIDAE - HERONS, EGRETS, BITTERNS		
Great Blue Heron	R	
Great Heron	* - R	
Great Egret	* - SR	
Snowy Egret	T	
Black-crowned Night Heron	T	
Yellow-crowned Night Heron	* - T	
Least Bittern	* - T	
THRESKIORNITHIDAE - IBISES		
White-faced Ibis	* - T	
ANITIDAE - DUCKS, GEESE & SWANS		
Whistling Swan	* - T	
Canada Goose	T	
Snow Goose	T	
Mallard	R	
Mexican Duck	* - SR	
Gadwall	T	
Pintail	T	
Green-winged Teal	T	
Blue-winged Teal	T	
Cinnamon Teal	T	
American Wigeon	T	
Northern Shoveler	T	
Wood Duck	T	
Redhead	T	
Ring-necked Duck	T	
Canvasback	T	
Lesser Scaup	T	
Common Goldeneye	T	
Bufflehead	T	
Ruddy Duck	T	
Hooded Merganser	* - T	
Common Merganser	R	
Red-breasted Merganser	* - T	

Common Name	Status	Notes or Comments
CATHARTIDAE - VULTURES		
Turkey Vulture	SR	
ACCIPITRIDAE - HAWKS, EAGLES, HARRIERS		
Goshawk	* - WR	
Sharp-skinned Hawk	R	
Cooper's Hawk	R	
Red-tailed Hawk	R	
Swainson's Hawk	WR	Rare Summer Resident
Zone-tailed Hawk	SR	
Ferruginous Hawk	* - T	
Black Hawk	SR	
Marsh Hawk	WR	
Golden Eagle	R	
Bald Eagle	WR	Summer Resident 1913 Gila Forks
FALCONIDAE - FALCONS		
Prairie Falcon	R	
Peregrine Falcon	* - SR	
Merlin (Pigeon Hawk)	WR	
American Kestrel (Sparrow Hawk)	R	
PANDIONIDAE - OSPREYS		
Osprey	T	Summer Resident 1916, 1966
TETRAONIDAE - GROUSE		
Blue Grouse	R	
PHASIANIDAE - QUAIL, PHEASANT		
Scaled Quail	R	
Gambel's Quail	R	
Montezuma (Mearns) Quail	R	
Ring-necked Pheasant	R	Introduced
Chukar	R	Widely introduced but unsuccessfully
MELEAGRIDIDAE - TURKEY		
Wild Turkey	R	
GRUIDAE - CRANES		
Sandhill Crane	WR	
RALLIDAE - RAILS, GALLINULES, COOTS		
Virginia Rail	T	
Sora	T	
Common Gallinule	* - SR	
American Coot	R	

Common Name	Status	Notes or Comments
CHARARIIDAE - PLOVERS		
Killdeer	R	
Semipalmated Plover	* - T	
Black-bellied Plover	* - T	
SCOLOPACIDAE - SANDPIPERS, SNIPES		
Common Snipe	WR	
Spotted Sandpiper	SR	
Solitary Sandpiper	T	
Pectoral Sandpiper	T	
Least Sandpiper	T	
Willet	T	
Greater Yellowlegs	T	
Lesser Yellowlegs	T	
Long-billed Dowitcher	T	
Marbled Godwit	* - T	
RECIRVOROSTRIDAE - AVOCETS & STILTS		
American Avocet	* - T	
Black-necked Stilt	* - R	Casual on Mimbres River June 1921
PHALAROPODIDAE - PHALAROPES		
Wilson's Phalarope	* - T	
Northern Phalarope	* - T	
LARIDAE - GULLS, TERNS		
Ring-billed Gull	T	
Franklin's Gull	* - T	
Black Tern	* - T	
COLUMIDAE - PIGEONS, DOVES		
Band-tailed Pigeon	SR	
Rock Dove	R	Widely Introduced
Mourning Dove	R	
White-winged Dove	SR	
CULCULIDAE - CUCKOOS, ROADRUNNERS		
Yellow-billed Cuckoo	SR	
Roadrunner	R	
TYTONIDAE - BARN OWLS		
Barn Owl	R	
STRIGIDAE - OWLS		
Screech Owl	R	
Great Horned Owl	R	
Pygmy Owl	R	
Elf Owl	SR	
Burrowing Owl	R	
Spotted Owl	R	
Flammulated Owl	SR	
Long-eared Owl	WR	
Saw-whet Owl	WR	

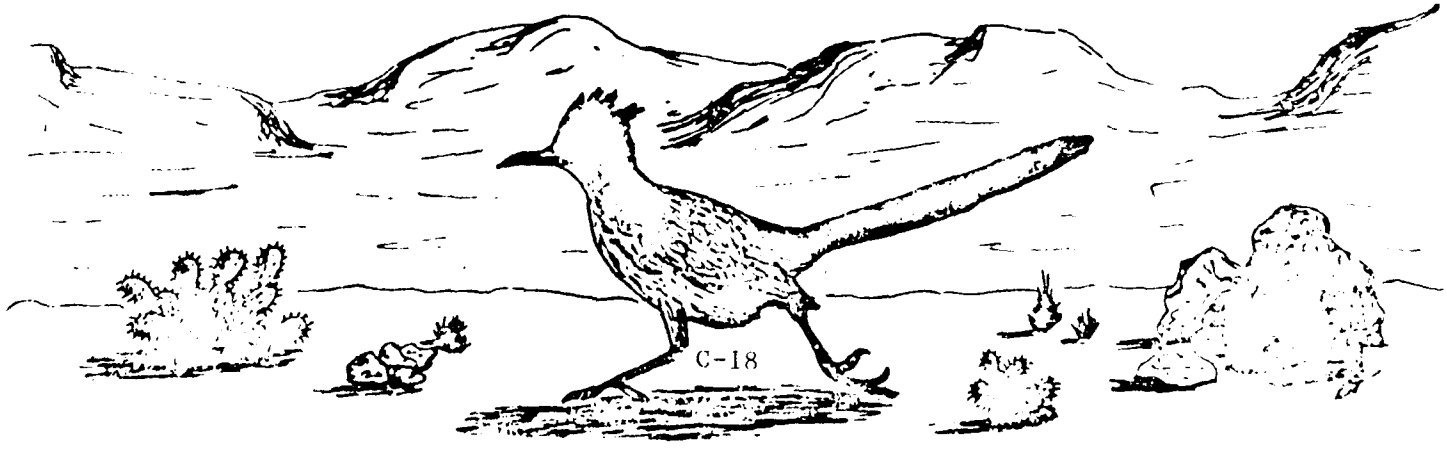
Common Name	Status	Notes or Comments
CAPRIMULGIDAE - GOATSUCKERS		
Whip-poor-will	SR	
Poor-will	SR	
Common Nighthawk	SR	
Lesser Nighthawk	SR	
APODIDAE - SWIFTS		
Black Swift	* - T	
White-throated Swift	SR	
TROCHILIDAE - HUMMINGBIRDS		
Black-chinned Hummingbird	SR	
Broad-tailed Hummingbird	SR	
Rufous Hummingbird	SR	
Calliope Hummingbird	SR	
Rivoli's Hummingbird	SR (?)	
ALCEDINIDAE - KINGFISHERS		
Belted Kingfisher	SR	
PICIDAE - WOODPECKERS		
Common Flicker (Red Shafted Flicker)	R	
Gila Woodpecker	R	
Acorn Woodpecker	R	
Lewis' Woodpecker	R,T	Resident Apache Creek
Yellow-bellied Sapsucker	R	
Hairy Woodpecker	R	
Ladder-backed Woodpecker	R	
Williamson's Sapsucker	R	
Downy Woodpecker	R	
Northern Three-toed Woodpecker	*-T	
TYRANNIDAE - FLYCATCHERS		
Western Kingbird	SR	
Cassin's Kingbird	SR	
Scissor-tailed Flycatcher	* - T	
Wied's Flycatcher	SR	
Ash-throated Flycatcher	SR	
Eastern Phoebe	* - T	
Black Phoebe	R	
Say's Phoebe	R	
Gray Flycatcher	T (*-SR)	
Traill's Flycatcher	SR	
Hammond's Flycatcher	T	
Dusky Flycatcher	T	
Coues' Flycatcher	* - SR	
Western Flycatcher	SR	
Western Wood Pewee	SR	
Olive-sided Flycatcher	T	
Vermilion Flycatcher	SR	

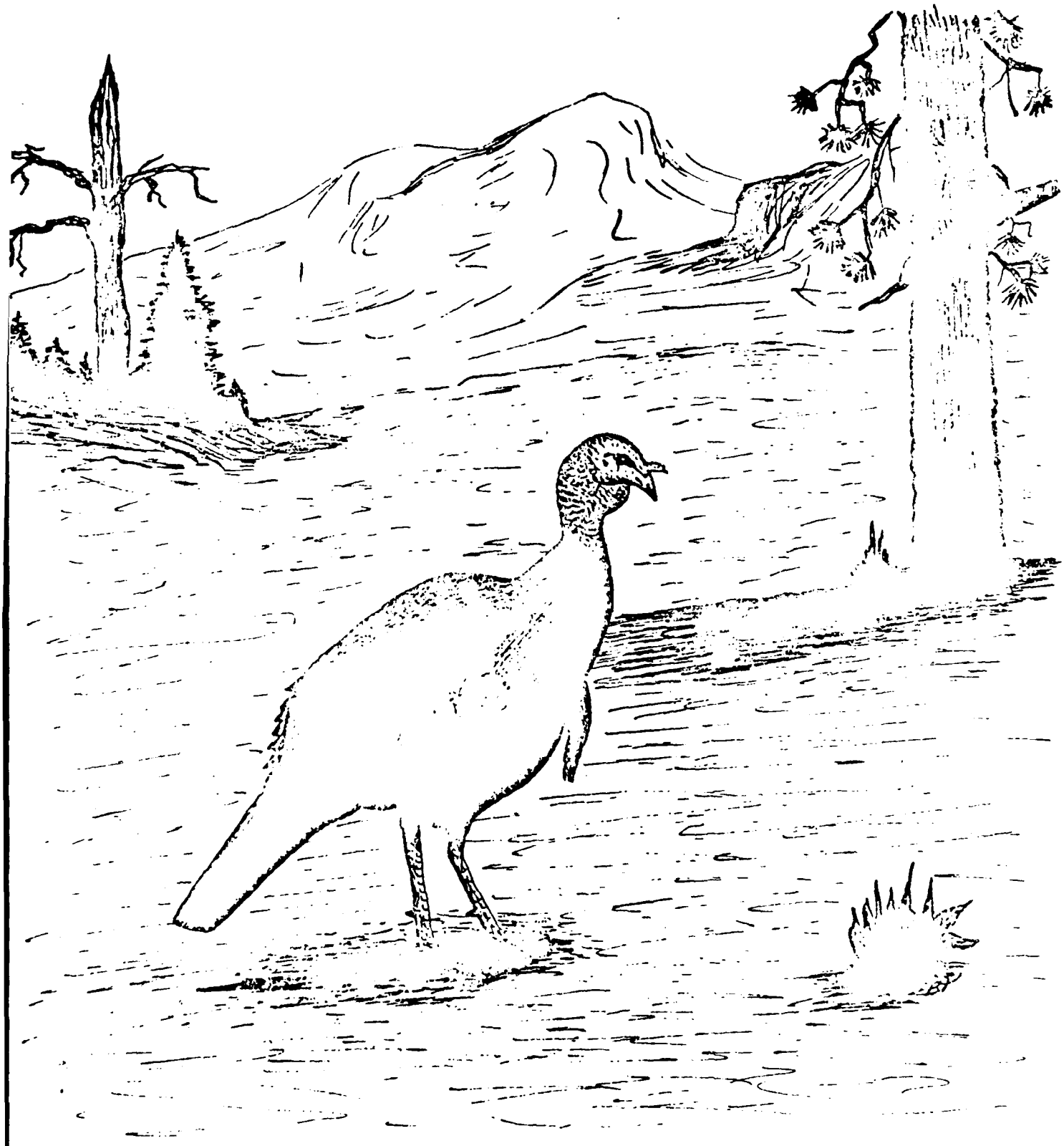
Common Name	Status	Notes or Comments
ALAUDIDAE - LARKS		
Horned Lark	R	
HIRUNDINIDAE - SWALLOWS		
Violet-green Swallow	SR	
Tree Swallow	* - T	
Bank Swallow	* - T	
Rough-winged Swallow	SR	
Barn Swallow	SR	
Cliff Swallow	SR	
Purple Martin	SR	
CORVIDAE - JAYS AND CROWS		
Steller's Jay	R	
Mexican (Arizona) Jay	R	
Scrub Jay	R	
Common Raven	R	
White-necked Raven	R	
Common Crow	R	
Clark's Nutcracker	R	
Pinyon Jay	R	
PARIDAE - CHICKADEES, TITMICE, BUSHTITS		
Mexican Chickadee	* - SR	
Mountain Chickadee	R	
Plain Titmouse	R	
Bridled Titmouse	R	
Verdin	R	
Bushtit	R	
Black-capped Chickadee	* - R	
SITTIDAE - NUTHATCHES		
White-breasted Nuthatch	R	
Red-breasted Nuthatch	WR	
Pygmy Nuthatch	R	
CERTHIIDAE - CREEPERS		
Brown Creeper	R	
CINCLIDAE - DIPPERS		
Dipper	R	
TROGLODYTIDAE - WRENS		
House Wren	SR	
Bewick's Wren	R	
Cactus Wren	R	
Long-billed Marsh Wren	* - WR	
Canyon Wren	R	
Rock Wren	R	

Common Name	Status	Notes or Comments
MIMIDAE - MOCKINGBIRDS, THRASHERS		
Mockingbird	R	
Catbird	* - SR	
Brown Thrasher	* - T	
Bendire's Thrasher	* - SR	
Curve-billed Thrasher	R	
Crissal Thrasher	R	
Sage Thrasher	* - WR	
TURDIDAE - THRUSHES, BLUEBIRDS		
American Robin	R	
Hermit Thrush	SR	
Swainson's Thrush	* - SR	
Eastern Bluebird	* - WR	
Western Bluebird	R	
Mountain Bluebird	R	
Townsend's Solitaire	R	
SYLVIIDAE - GNATCATCHERS, KINGLETS		
Blue-gray Gnatcatcher	SR	
Black-tailed Gnatcatcher	* - WR	
Golden-crowned Kinglet	T - WR	
Ruby-crowned Kinglet	WR	
MOTACILLIDAE - PIPITS		
Water Pipit	R	
BOMBYCILLIDAE - WAXWINGS		
Cedar Waxwing	WR	
PTILOGONATIDAE - SILKY FLYCATCHERS		
Phainopepla		
LANIIDAE - SHRIKES		
Loggerhead Shrike	R	
STURNIDAE - STARLING		
Starling	R	
VIREONIDAE - VIREOS		
Hutton's Vireo	* - SR	
Bell's Vireo	SR	
Gray Vireo	* - SR	
Solitary Vireo	SR	
Warbling Vireo	SR	
PARULIDAE - WOOD WARBLERS		
Black & White Warbler	* - T	
Tennessee Warbler	* - T	
Orange-crowned Warbler	T - SR	
Nashville Warbler	* - T	
Virginia's Warbler	SR	
Lucy's Warbler	SR	

Common Name	Status	Notes or Comments
PARULIDAE - WOOD WARBLERS (cont)		
Olive Warbler	SR	
Yellow Warbler	SR	
Yellow-rumped Warbler		
(Myrtle)	* - T	
(Audubon's)	SR	
Black-throated Gray Warbler	SR	
Townsend's Warbler	T	
Hermit Warbler	T	
Grace's Warbler	SR	
Blackpoll Warbler	* - T	
Palm Warbler	* - T	
Northern Waterthrush	T	
MacGillivray's Warbler	SR	
Common Yellowthroat	SR	
Yellow-breasted Chat	SR	
Red-faced Warbler	SR	
Wilson's Warbler	T	
American Redstart	T	
Painted Redstart	SR	
PLODEIDAE - WEAVER FINCH		
House (English) Sparrow	R	
ICTERIDAE - MEADOWLARKS, BLACKBIRDS, ORIOLES		
Eastern Meadowlark	R	
Western Meadowlark	R	
Yellow-headed Blackbird	T	
Red-winged Blackbird	SR	
Orchard Oriole	* - T	Near Cliff June 1967
Hooded Oriole	SR	
Northern Oriole	SR	
(Bullock's Oriole)		
Scott's Oriole	SR	
Brewer's Blackbird	SR	
Great-tailed Grackle	SR	
Brown-headed Cowbird	SR	
Bronzed Cowbird	SR	
THRAUPIDAE - TANAGERS		
Western Tanager	SR	
Hepatic Tanager	SR	
Summer Tanager	SR	
FRINGILLIDAE - GROSBEAKS, FINCHES, SPARROWS, BUNTINGS		
Cardinal	SR	
Pyrrhuloxia	* - WR	
Black-headed Grosbeak	SR	
Rose-breasted Grosbeak	* - T	
Blue Grosbeak	SR	
Lazuli Bunting	T	

Common Name	Status	Notes or Comments
FRINGILLIDAE - (Continued)		
Indigo Bunting	SR	
Evening Grosbeak	* - R - T	
Purple Finch	* - T	
House Finch	R	
Cassin's Finch	T - WR	
Pine Siskin	R	
American Goldfinch	WR	
Lesser Goldfinch	SR	
Red Crossbill	R	
Green-tailed Towhee	WR	
Rufous-sided (Spotted Towhee)	R	
Brown Towhee	R	
Abert's Towhee	R	
Lark Bunting	T	
Vesper Sparrow	WR	
Lark Sparrow	SR	
Rufous-crowned Sparrow	R	
Black-throated Sparrow	R	
Cassin's Sparrow	* - SR	
Gray-headed Junco		
Dark-eyed Junco (Oregon Junco)	T - WR	
" " " (Slate-colored Junco)	T - WR	
Chipping Sparrow	SR	
Brewer's Sparrow	WR	
Harris' Sparrow	* - T	
White-crowned Sparrow	WR	
Golden-crowned Sparrow	* - T	
White-throated Sparrow	* - T	
Fox Sparrow	WR - T	
Lincoln's Sparrow	WR - T	
Swamp Sparrow	WR - T	
Song Sparrow	WR	
Savannah Sparrow	WR - T	
Black-chinned Sparrow	SR	
Chestnut-colored Longspur	WR	





PRELIMINARY FIELD CHECKLIST

REPTILES, AMPHIBIANS, AND FISHES OF THE GILA NATIONAL FOREST AND IMMEDIATE AREA

U.S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE
GILA NATIONAL FOREST

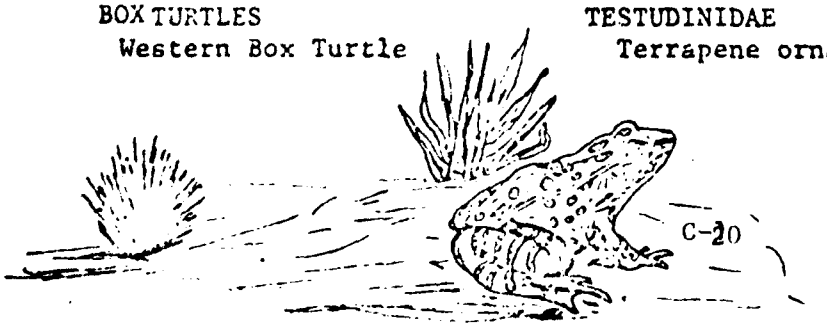
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Artwork Bonnee Turner
Dr. B. J. Hayward - Western New Mexico University
Joe Janes and Bill D. Rogers - Compilers, Forest Naturalists

FIELD GUIDES AND REFERENCES

A Field Guide to Western Reptiles and Amphibians, Stebbins, R. C., 1966.
Amphibians and Reptiles of Western North America, Stebbins, R. C., 1954.
"National Park Service Field Notes", Gila Cliff Dwellings National Monument.

Common Name	Scientific Name	Notes or Comments
SALAMANDERS	AMBYSTOMIDAE	
Tiger Salamander	Ambystoma tigrinum	
SPADEFOOT TOADS	PELOBATIDAE	
Couch's Spadefoot	Scaphiopus couchi	
Western Spadefoot	Scaphiopus hammondi	
Plains Spadefoot	Scaphiopus bombifrons	
Great Basin Spadefoot	Scaphiopus intermontanus	
TRUE TOADS	BUFONIDAE	
Woodhouse's Toad	Bufo woodhousei	
Southwestern Toad	Bufo microscaphus	
Red-spotted Toad	Bufo punctatus	
Great Plains Toad	Bufo cognatus	
Green Toad	Bufo debilis	
TREEFROGS	HYLIDAE	
Chorus Frog	Pseudocris triseriata	
Canyon Treefrog	Hyla arenicolor	
Arizona Treefrog	Hyla wrightorum	
TRUEFROGS	RANIDAE	
Leopard Frog	Rana pipiens	
Bullfrog	Rana catesbeiana	
BOX TURTLES	TESTUDINIDAE	
Western Box Turtle	Terrapene ornata	



MUD TURTLES	CHELYDRIDAE
Sonora Mud Turtle	*Kinosternon sonoriense*
SOFT SHELL TURTLES	TRIONYCHIDAE
Spiny Softshell	*Trionyx spiniferus*
IGUANID LIZARDS	IGUANIDAE
Lesser Earless LIzard	*Holbrookia maculata*
Greater Earless Lizard	*Holbrookia texana*
Collard Lizard	*Crotaphytus collaris*
Crevice Spiny Lizard	*Sceloporus poinsetti*
Clark's Spiny Lizard	*Sceloporus clarki*
Eastern Fence Lizard	*Sceloporus undulatus*
Striped Plateau Lizard	*Sceloporus virgatus*
Side-blotched Lizard	*Uta stansburiana*
Tree Lizard	*Urosaurus ornatus*
Short-horned Lizard	*Phrynosoma douglassi*
SKINKS	SCINCIDAE
Great Plains Skink	*Eumeces obsoletus*
Many-lined Skink	*Eumeces multivirgatus*
WHIPTAILS	TEIIDAE
New Mexico Whiptail	*Cnemidophorus neomexicanus*
Little Striped Whiptail	*Cnemidophorus inornatus*
Desert-Grassland Whiptail	*Cnemidophorus uniparens*
Chihuahua Whiptail	*Cnemidophorus exsanguis*
Western Whiptail	*Cnemidophorus tigris*
ALLIGATOR LIZARD	ANGUIDAE
Arizona Alligator Lizard	*Gerrhonotus kingi*
VENOMOUS LIZARDS	HELODERMATIDAE
Gila Monster	*Heloderma suspectum*
SLENDER BLIND SNAKES	LEPTOTYPHLOPIDAE
Texas Blind Snake	*Leptotyphlops dulcis*
COLUBRID SNAKES	COLUBRIDAE
Ringneck Snake	*Diadophis punctatus*
Coach Whipsnake	*Masticophis flagellum*
Striped Whipsnake	*Masticophis taeniatus*
Western Patch-nosed Snake	*Salvadora hexalepis*
Mountain Patch-nosed Snake	*Salvadora grahamiae*
Gopher or Bullsnake	*Pituophis melanoleucus*
Common Kingsnake	*Lampropeltis getulus*
Sonora Mountain Kingsnake	*Lampropeltis pyromelana*
Narrow-Headed Garter Snake	*Thamnophis rufipunctatus*
Western Terrestrial Garter Snake	*Thamnophis elegans*
Black-necked Garter Snake	*Thamnophis cyrtopsis*
Checkered Garter Snake	*Thamnophis marcianus*
Western Ground Snake	*Sonora semiannulata*
Western Black-headed Snake	*Tantilla planiceps*
Plains Black-headed Snake	*Tantilla migriceps*
Night Snake	*Hypsiglena torquata*

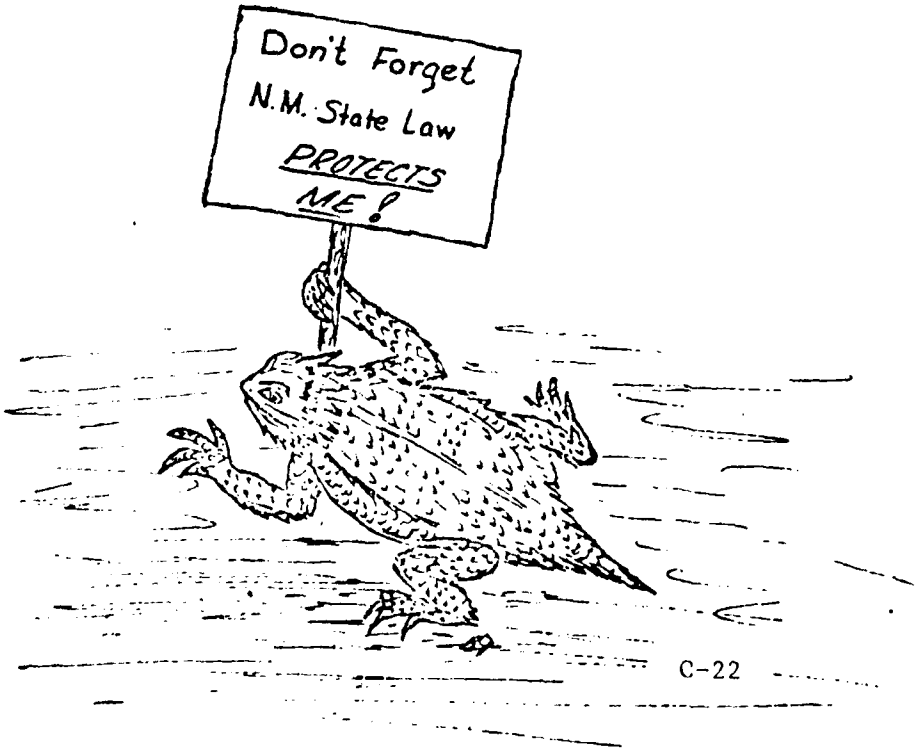
CORAL SNAKES	ELAPIDAE
Arizona Coral Snake	Micruroides euryxanthus
VIPERS	VIPERIDAE
Western Diamondback Rattlesnake	Crotalus atrox
Rock Rattlesnake	Crotalus lepidus
Black-tailed Rattlesnake	Crotalus molossus
Western Rattlesnake	Crotalus viridis

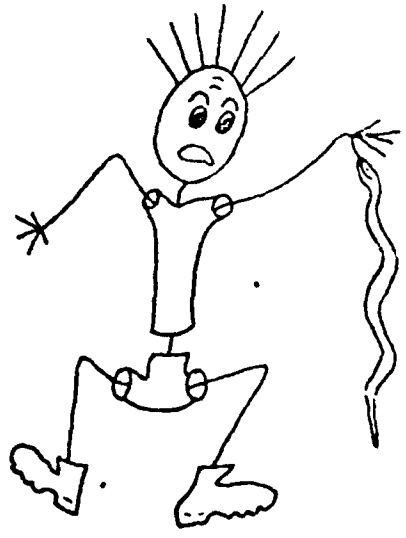
CAUTION

Most snake bites occur to people who are trying to kill or catch snakes. Rattlesnakes are the fastest striking poisonous snakes in the world, it is best to stay away from them.

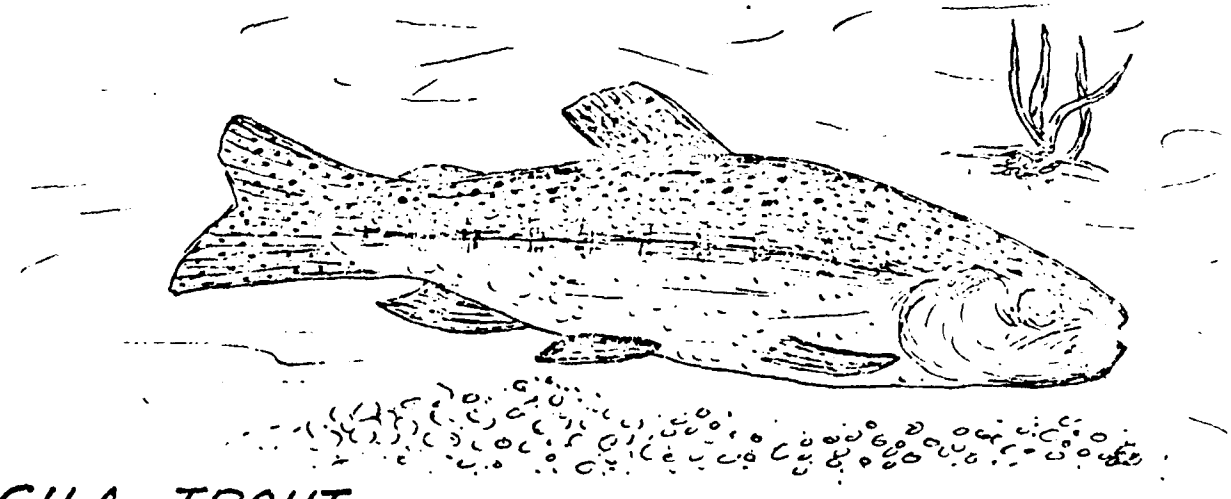
Most snakes that get killed by people are harmless. Most of the snakes and other reptiles you will see are harmless. Please do not kill harmless reptiles.

All horned lizards (horned toads) are protected in the State of New Mexico. It is illegal to kill, sell or take them from the State.





Common Name	Scientific Name
SALMON (TROUT)	SALMONIDAE
Gila Trout	Salmo gilae
Rainbow Trout	Salmo gairdneri
Brown Trout	Salmo trutta
Eastern Brook Trout	Salmo fontinalis
SUCKERS	CATOSTOMIDAE
Gila Sucker	Catostomus insignis
Rio Grande Mountain Sucker	Pantosteus plebeius
Gila Mountain-sucker	Pantosteus clarki
MINNOW FAMILY	CYRRINIDAE
Bonytail	Gila robusta
~~long fin~~ dace	~~Acogin~~ chrysogaster
Flathead chub	Hybopsis gracilis
Speckled dace	Rhinichtys osculus
Loach minnow	Tiarogo cobitis
Spike dace	Meda fulgida
Gila Topminnow	Peociliopsis occidentalis
CATFISH	ICTALURIDAE
Yellow bullhead	Ictalurus natalis
Flathead Catfish	Pylodictis olivaras
Black Bullhead	Ictalurus melas
Channel Catfish	Ictalurus punctatus
SUNFISH FAMILY	CENTRARCHIDAE
Largemouth black bass	Micropterus salmoides
Smallmouth black bass	Micropterus dolomieui
Bluegill	Lepomis macrochirus



GILA TROUT

C-23

ENDANGERED

Protected by N.M. State Law

U. S. FOREST SERVICE
GILA NATIONAL FOREST

SOME PLANTS OF THE GILA RIVER-LAKE ROBERTS RECREATION AREA
Revised January 1974

The following guides have illustrations and descriptions of many of these plants.

Dodge, Natt N., Flowers of the Southwest Deserts,
100 Desert wildflowers in natural color
100 Roadside wildflowers of southwest uplands in natural color
Southwestern Monuments Association, Globe, Arizona
Patraw, Pauline, Flowers of the Southwest Mesas,
Southwestern Monuments Association, Globe, Arizona
Arnberger, Leslie P., Flowers of the Southwest Mountains,
Southwestern Monuments Association, Globe, Arizona
Little, E. L., Southwestern Trees, USDA Handbook #9
Earle, W. H., Cacti of the Southwest, Desert Botanical Garden of Arizona,
Science Bulletin #4, Phoenix, Arizona

Latest Cactus nomenclature and distribution, courtesy of Dr. D. A. Zimmerman, Western New Mexico University.

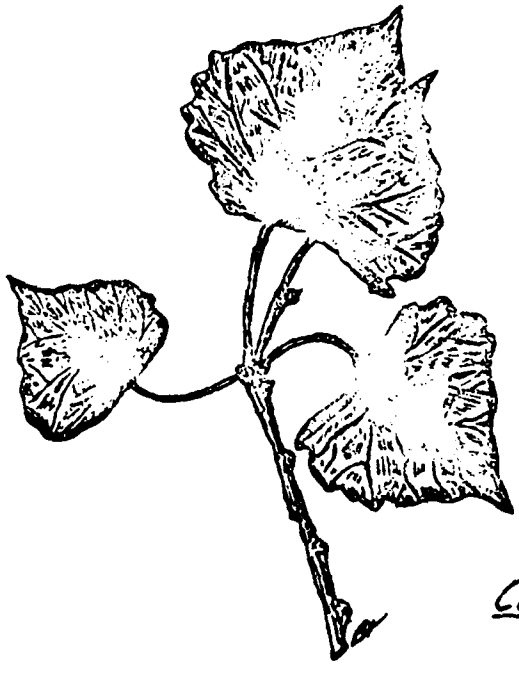
ILLUSTRATIONS: Bonnee Turner



Gambel Oak

TREES

Common Name	Scientific Name
Alder, Arizona	Alnus oblongifolia
Ash, velvet	Fraxinus velutina
Boxelder, inland	Acer negundo
Chokecherry, southwestern	Prunus virens
Cottonwood, Fremont	Populus fremontii
Cottonwood, lanceleaf	Populus acuminata
Cottonwood, narrowleaf	Populus angustifolia
Douglas - fir	Pseudotsuga menziesii
Juniper, alligator	Juniperus deppeana
Juniper, one-seed	Juniperus monosperma
Juniper, rocky mountain	Juniperus scopulorum
Oak, Gambel	Quercus gambeli
Oak, gray	Quercus grisea
Oak, silverleaf	Quercus hypoleucoides
Pine, Chihuahua (localized)	Pinus leiophylla
Pine, pinyon	Pinus edulis
Pine, ponderosa	Pinus *ponderosa*
Pine, southwestern white	Pinus strobiformis
Sycamore, Arizona	Platanus wrightii
Walnut, Arizona	Juglans major
Willow	Salix (species)



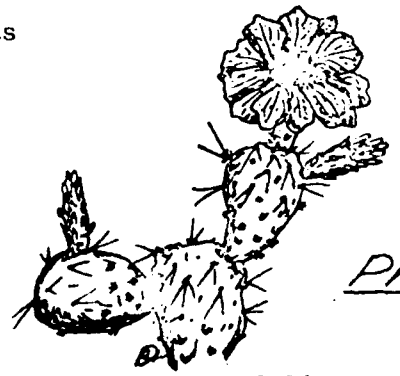
Cottonwood

WOODY PLANTS, SHRUBS AND VINES

Common Name	Scientific Name
Apache-Plume	Fallugia paradoxa
Bear Grass (Sacahuista)	Nolina microcarpa
Buck Brush (Deer Brier, N.J. Tea)	Ceonothus fendleri
Buckthorn, Birch-leaf	Rhamnus betulaefolia
Buffalo Gourd (Coyote Melon)	Cucurbita foetidissima
Brickel Bush	Brickellia (species)
Century Plant (Agave)	Agave Parryi
Cliff Fendler Bush	Fendlera rupicola
Cliff Rose	Cowania stansburiana
Currant, Golden	Ribes aureum
Grape, Canyon	Vitis Arizonica
Groundsel, Ragwort	Senecio multicapitatus
Morning Glory, Red Starflower	Ipomea coccinea
Mountain Mahogany	Cercocarpus breviflorus
Poison Ivy	Rhus radicans
Rabbit Brush	Chrysothamnus nauseosus
Squaw Bush (Skunk Bush)	Rhus trilobata
Virgins Bower (Clematis)	Clematis ligusticifolia
Virginia Creeper	Parthenocissus inserta
Wild Olive, New Mexico	Foresteria neomexicana
Wild Rose	Rosa (Species)
Wright Silktassel	Garrya wrightii

CACTUS

Common Name	Scientific Name
Prickly Pear, Smooth Mountain	Opuntia compressa
Prickly Pear, Purple Fruited	Opuntia phaeacantha discata
Prickly Pear, Sprawling	Opuntia phaeacantha major
Cholla, Cane	Opuntia spinosier
Hedgehog, Claret Cup	Echinocereus triglochidiatus
Hedgehog, Fendler	Echinocereus fendleri
Hen and Chicken Cactus	Coryphantha vivipara



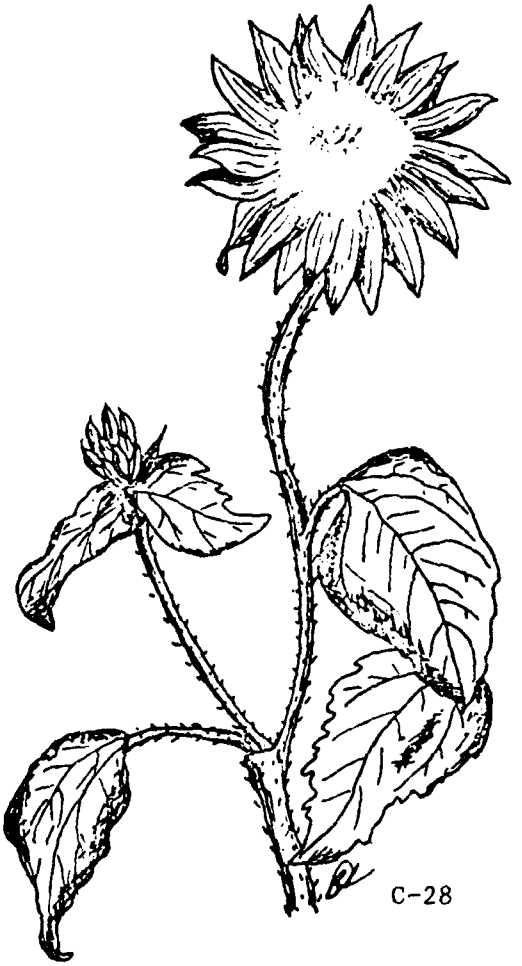
Prickly Pear

HERBS AND GRASSES

Common Name	Scientific Name
Alfilaria (Filaree. Herons Bill)	Erodium cicutarium
Aster	Aster (species)
Bee-Plant, Rocky Mountain	Cleome serrulata
Blue Bells	Mertensia franciscana
Candytuft	Thlaspi arvense
Cattail	Typha latifolia
Cinquefoil, Scarlet	Potentilla thurberi
Columbine, Yellow	Aquilegia chrysantha
Coneflower, Cutleaf	Rudbeckia laciniata
Datura (Jimson Weed. Thornapple)	Datura meteloides
Dayflower	Commelina dianthifolia
Deer Vetch	Lotus wrightii
Devils Claw (Unicorn Plant)	Proboscidea arenaria
Dock (Sorrel)	Rumex (species)
Evening Primrose	Oenothera (species)
False-Solomon-Seal	Smilicina racemosa
Firewheel	Gaillardia pulchella
Four O'Clock, Colorado	Mirabilis multiflora
Four O'Clock, Longneck	Mirabilis longiflora
Gaura	Gaura (species)
Geranium (cranesbill)	Geranium caespitosum
Gilia	Gilia (species)
Globe Mallow	Sphaeralcea coccinea
Goathead	Tribulus terrestis
Goldensmoke	Corydalis aurea
Groundsel	Senecio neomexicana
Horehound	Marrubium vulgare
Horsemint (Beebalm)	Monarda menthaefolia
Horsenettle (Silver Nightshade)	Solanum elaeagnifolium
Horsetail	Equisetum (species)
Lambsquarters (Goosefoot)	Chenopodium (species)
Larkspur (Wild Delphinium)	Delphinium (species)
Loco Weed (Milk Vetch)	Astragalus (species)
Lupine	Lupinus (species)
Meadowrue	Thalicitrum fendleri
Mistletoe	Phorodendron (species)
Mistletoe, Dwarf	Arceuthobium (species)
Monkeyflower, Yellow	Mimulus guttatus
Mullein (Indian Tobacco)	Verbascum thaspus
Onion	Allium (species)
Paintbrush (Indian Paintbrush)	Castilleja (species)
Penstemon, Beardlip	Penstemon barbatus
Penstemon, Purple	Penstemon jamesii
Peppergrass	Lepidium (species)
Pigweed	Amaranthus (species)

HERBS AND GRASSES (Continued)

Common Name	Scientific Name
Poison-Hemlock	Conium maculatum
Portulaca (Purslane)	Portulaca (species)
Prickle Poppy	Argemone platyceras
Rubberweed (Bitter Rubberweed)	Hymenoxys (species)
Rush	Juncus (species)
Salisfy (Goatsbeard. Oysterplant)	Tragapogon dubius
Snake Weed (Match-Weed)	Guitierrezia sarothrae
Starflower (Starry Solomon Plume)	Smilacina stellata
Sunflower	Helianthus (species)
Stickleaf Mentzelia	Mentzelia albacaulis
Stinging Nettle	Urtica gracilis
Thistle, New Mexico	Cirsium neomexicana
Tumble-Mustard	Sisymbrium (species)
Verbena, Dakota (Vervain)	Verbena bipinnatifida
Violet, Canada	Viola canadensis
Water Hemlock	Cicuta douglasii
Western Wallflower	Erysimum capitatum
White Sweetclover	Melilotus alba
Wild Buckwheat	Eriogonum (species)
Wild Daisy (Fleabane)	Erigeron (species)
Wild Strawberry	Fragaria bracteata
Yarrow	Achillea lanulosa
Yellow Sweetclover	Melilotus indicus



Sunflower

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